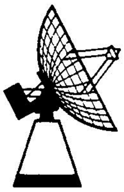
NEC

MODEL XM-3750
XP-3778
XM-3750G
XP-3778G

MultiSync Multimedia Monitor

SERVICE MANUAL

PART No. 399910842



Better Service
Better Reputation
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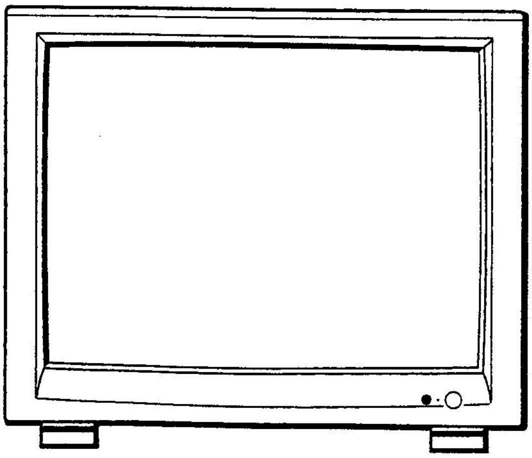
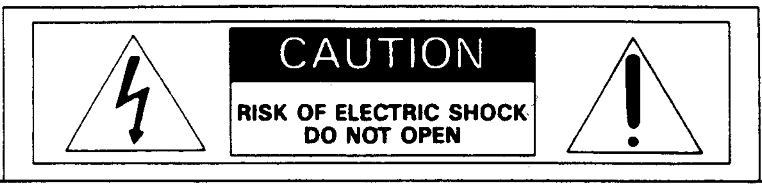


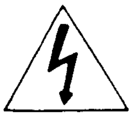
SAFETY CAUTION:
Before servicing this chassis, it is important that the service technician read and follow the "Safety Precautions" and "Product Safety Notice" in this Service Manual.
* For continued X-radiation protection, replace picture tube with original type or NEC approved equivalent type.

WARNING:
SHOCK HAZARD - Use an isolation transformer when servicing.

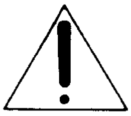
NEC Corporation
TOKYO, JAPAN



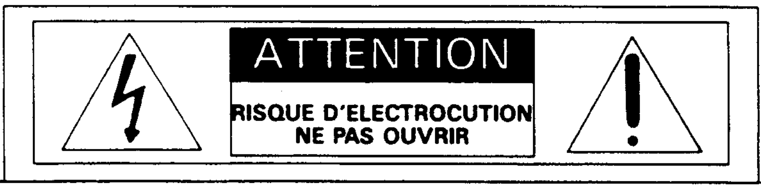
CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER (OR BACK). NO USER-SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.



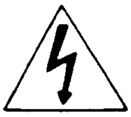
This symbol warns the user that uninsulated voltage within the unit may have sufficient magnitude to cause electric shock. Therefore, it is dangerous to make any kind of contact with any part inside of this unit.



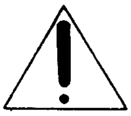
This symbol alerts the user that important literature concerning the operation and maintenance of this unit has been included.
Therefore, it should be read carefully in order to avoid any problems.



ATTENTION: POUR EVITER LES RISQUES D'ELECTROCUTION, NE PAS ENLEVER LE COUVERCLE (OU LE DOS). AUCUN DES ELEMENTS INTERNES NE DOIT ETRE REPARE PAR L'UTILISATEUR. NE CONFIER L'ENTRETIEN QU'A UN PERSONNEL QUALIFIE.



L'éclair fléché dans un triangle équilatéral est destiné à avertir l'utilisateur de la présence, dans l'appareil, d'une zone non-isolée soumise à une haute tension dont l'intensité est suffisante pour constituer un risque d'électrocution.



Le point d'exclamation dans un triangle équilatéral est destiné à attirer l'attention de l'utilisateur sur la présence d'informations de fonctionnement et d'entretien importantes dans la brochure accompagnant l'appareil.

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SAFETY PRECAUTIONS

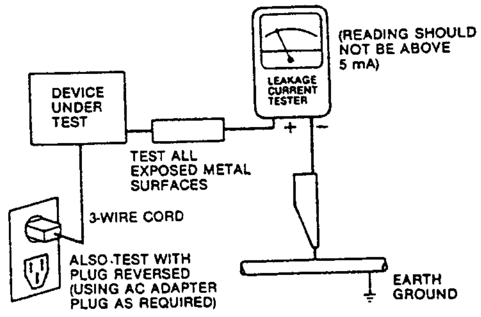
1. **Before returning an instrument to the customer,** always make a safety check of the entire instrument, including, but not limited to, the following items.

   a. Be sure that no built-in protective devices are defective and/or have been defeated during servicing. (1) Protective shields are provided on this chassis to protect both the technician and the customer. Correctly replace all missing protective shields, including any removed for servicing convenience. (2) When reinstalling the chassis and/or other assembly in the cabinet, be sure to put back in place all protective devices, including,but not limited to, nonmetallic control knobs,insulating fishpapers,adjustment and compartment covers/shields, and isolation resistor/capacitor networks. **Do not operate this instrument or permit it to be operated without all protective devices correctly installed and functioning.**

   b. Be sure that there are no cabinet openings through which an adult or child might be able to insert their fingers and contact a hazardous voltage. Such opening include,but are not limited to, (1) spacing between the picture tube and the cabinet mask, (2) excessively wide cabinet ventilation slots, and (3) an improperly fitted and/or incorrectly secured cabinet back cover.

   c. **Leakage Current Hot Check** — With the instrument completely reassembled,plug the AC line cord directly into a 120V AC outlet. (Do not use an isolation transformer during this test.) Use a leakage current tester or a metering system that complies with American National Standards Institutes (ANSI) C101.1 Leakage Current for Appliances and Underwriters Laboratories(UL) 478. With the instrument AC switch first in the ON position and then in the OFF position, measure from a known earth ground (metal waterpipe, conduit,etc.) to all exposed metal parts of the instrument(antennas, handle bracket, metal cabinet, screwheads, matallic overlays, control shafts,etc.), especially any exposed metal parts that offer an electrical return path to the chassis. Any current measured must not exceed 5 milliamp. Reverse the instrument power cord plug in the outlet and repeat test.**ANY MEASUREMENTS NOT WITHIN THE LIMITS SPECIFIED HEREIN INDICATE A POTENTIAL SHOCK HAZARD THAT MUST BE ELIMINATED BEFORE RETURNING THE INSTRUMENT TO THE CUSTOMER.**

AC Leakage Test


(READING SHOULD NOT BE ABOVE 5 mA)
LEAKAGE CURRENT TESTER
DEVICE UNDER TEST
+
−
TEST ALL EXPOSED METAL SURFACES
3-WIRE CORD
ALSO TEST WITH PLUG REVERSED (USING AC ADAPTER PLUG AS REQUIRED)
EARTH GROUND

2. Read and comply with all caution and safety-related notes on or inside the receiver cabinet, on the receiver chassis, or on the picture tube.

3. **Design Alteration Warning** — Do not alter or add to the mechanical or electrical design of this unit. Design alterations and additions, including, but not limited to, circuit modifications and the addition of the items such as auxiliary audio and/or video output connections might alter the safety characteristics of this receiver and create a hazard to the user. Any design alterations or additions will void the manufacturer's warranty and will make you,the servicer,responsible for personal injury or property damage resulting therefrom.

4. **Hot Chassis Warning — a.** Some Monitor chassis are electrically connected directly to one conductor of the AC power cord and may be safely serviced without an isolation transformer only if the AC power plug is inserted so that the chassis is connected to the ground side of the AC power source. To confirm that the AC power plug is inserted correctly, with an AC voltmeter measure between the chassis and a known earth ground. If a voltage reading in excess of 1.0V is obtained, remove and reinsert the AC power plug in the opposite polarity and again measure the voltage potential between the chassis and a known earth ground. **b.** Some Monitor chassis normally have 85V AC (RMS), between chassis and earth ground regardless of the AC plug polarity. These chassis can be safely serviced only with an isolation transformer inserted in the power line between the receiver and the AC power source, for both personnel and test equipment protection. **c.** Some Monitor chassis have a secondary ground systems in addition to the main chassis ground. This secondary ground system is not isolated from the AC power line. The two ground system are electrically separated by insulating material that must not be defeated or altered.

5. Observe original lead dress. Take extra care to assure correct lead dress in the following areas: **a.** near sharp edges, **b.** near thermally hot parts—be sure that leads and components do not touch thermally hot parts, **c.** the AC supply, **d.** high voltage, and **e.** antenna wiring. Always inspect in all areas for pinched, out-of-place, or frayed wiring. Do not change spacing between components, and between components and the printed-circuit board. Check AC power cord for damage.

6. Components,parts, and/or wiring that appear to have overheated or are otherwise damaged should be replaced with components, parts, or wiring that meet original specifications. Additionally,determine the cause of overneating and/or damage and, if necessary, take corrective action to remove any potential safety hazard.

7. **PRODUCT SAFETY NOTICE** —Many Monitor electrical and mechanical parts have special safety-related characteristics some of which are often not evident from visual inspection, nor can the protection they give necessarily be obtained by replacing them with components rated for higher voltage, wattage, etc. Parts that have special safety characteristics are identified in this service data by shading with a⚠mark on schematics and by shading or a ⚠ mark in the parts list. Use of a substitute replacement part that does not have the same safety characteristics as the recommended replacement part in this service data parts list might create shock, fire, and/or other hazards.

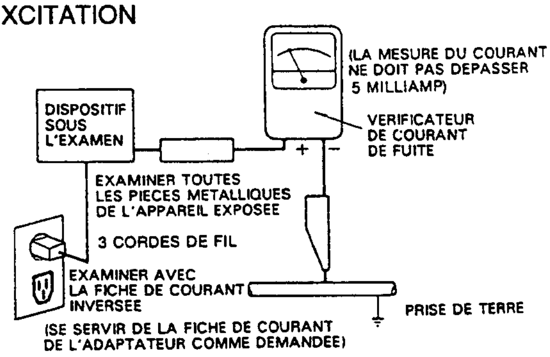
PRECAUTIONS DE SECURITE

1. **Avant de remettre un appareil à un client,** faire toujours d'abord un examen de sécurité de l'appareil en entier comprenant, mais ne s'y limitant pas les points cités ci-dessous:
   a. Vérifier qu' aucun des dispositifs de protection ne soit défectueux ou n' ait été endommagé pendant les travaux.
   (1) Les volets protecteurs sur ce châssis ont été montés pour protéger aussi bien le technicien que le client. Remplacer correctement tous les volets protecteurs manquants, aussi bien que ceux qui ont pu être enlevés pour la commodité des travaux.
   (2) Quand vous remettez le châssis ou d'autres assemblages ensemble dans le coffret, vérifier qu' ont été remis à leur place tous les dispositifs de protection, comprenant mais ne s' y limitant point, les boutons de contrôle non-métalliques, les feuilles d'isolation, les couverture/volets de l'ajustement et du compartiment, et l'isolation des réseaux résistance/condensateur. **Ne pas travailler sur cet appareil ni permettre qu'y soit effectué un travail sans que tous les dispositifs de protection n' y soient correctement installés fonctionnants.**

   b. Bien vérifier qu'il n'y ait aucune ouverture sur le coffret qui ne puisse permettre à un adulte ou à un enfant d'y faire pénétrer ses doigts et attraper une décharge électrique.
   De telles ouvertures comprendraient sans pour autant s'y limiter (1) l'espace entre le tube à images et le coffret de l'eppareil, (2) les espaces excessivement ouverts pour la ventilation et (3) la couverture arrière du coffret improprement fixée ou incorrectement protegée.

   c. **Vérification de courant de fuite**
   L'appareil ayant été complètement réassemblé, brancher-le à une prise de courant de 120V. (Ne pas se servir d'un transformateur d'isolation pendant ce test). Se servir d'un vérificateur de courant d'excitation ou d'un système de mesure conforme aux normes ANSI (American National Standards Institute) C101.1 Leakage Current for Appliances et U. L (Underwriters Laboratories) 478. Le bouton de l'appareil en position "Marche" et ensuite en position "Arrêt", mesurer à partir d'une prise de terre (métallique tuyauterie, conduite, etc...) à toutes les pièces métalliques de l'appareil exposées (antennes, poignet métalliques, coffren métallique, tête des vis, surfaces métalliques, traits de contrôle, etc.) surtout à toutes les pièces métalliques exposées qui peuvent reconduire le courant au châssis. En aucun cas, la mesure du courant ne doit dépasser 5 milliamp. Inverser la fiche de courant de l'appareil dans la prise et répéter le test. **Tout mesurage ne s'arrêtant pas aux limites spécifiées icicomporte un risque de décharge électrique dangereux, qui doit être éliminé, avant que l'appareil ne soit remis au client.**

EXAMEN DE COURANT
D'EXCITATION


(LA MESURE DU COURANT NE DOIT PAS DEPASSER 5 MILLIAMP)
DISPOSITIF SOUS L'EXAMEN
VERIFICATEUR DE COURANT DE FUITE
+
−
EXAMINER TOUTES LES PIECES METALLIQUES DE L'APPAREIL EXPOSEE
3 CORDES DE FIL
EXAMINER AVEC LA FICHE DE COURANT INVERSEE
PRISE DE TERRE
(SE SERVIR DE LA FICHE DE COURANT DE L'ADAPTATEUR COMME DEMANDEE)

2. **Lire et réspecter** toutes les mises en garde et notes de sécurité à l'intérieur ou à l'extérieur du coffret du récepteur, sur le châssis du récepteur ou sur le tube à images.

3. **Mise en garde contre la modification du dessin**
   Ne pas modifier ni ajouter à la pièce mécanique ou électrique du modèle. Des modifications ou additions, comportant, mais ne s'y limitant pas, des modifications des circuits et l'addition d'éléments tels que des auxilliairs audio et/ou des branchements pour la prise de vidéo, pourrait éprouver la sécurité de ce récepteur et créer un risque pour l'utilisateur. Tout changement ou addition accomplie annulera la garantie du fabricant et va rendre votre service d'entretien, responsable des dommages corporels ou de biens en résultant.

4. **Mise en garde contre le châssis sous tension**
   a. Certains châssis de moniteur sont électriquement reliés à un conducteur du fil de courant et ainsi peuvent ne comporter aucun risque sans un transformateur d'isolation seulement si la prise de courant est branchée, de manière que le châssis est relié à la prise de terre de la source de courant. Pour s'assurer que la prise de courant est correctement insérée, relever les mesures avec un voltmètre de courant entre le châssis et un point de prise de terre bien connu. Si le voltage indiqué est supérieur à 1,0V, débrancher et reinsérer la prise de courant dans la polarité contraire et une fois de plus remesurer le voltage potentiel entre le câssis et la prise de terre.

b. Certains châssis de moniteur ont habituellement 85V (RMS) entre le châssis et la prise de terre, en fonction de la polarité de la prise de courant. Ces châssis peuvent ne comporter aucun risque seulement avec un transformateur d'isolation inséré dans la ligne de puissance située entre de moniteur et la source d'électricité, cela pour la protection aussi bien du personnel que du matériel de vérfication.

c. Certains châssis de moniteur ont un système secondaire de masse en addition avec le système principal de masse du châssis. Ce système secondaire de masse n'est pas isolé du courant électrique. Les deux systèmes sont électriquement séparés par du matériel d'isolation qu' on vérifiera bien qu'il ne soit ni altéré ni défectueux.

5. Vérifier la couverture originale en plomb. Accorder la plus grande attention à la couverture de plomb notamment aux endroits ci-dessous indiqués.
   a. Près des bords aigus
   b. près des parties très chaudes
   Vérifier que les composants et les plombs ne touchent pas les parties très chaudes telles que:
   c. l'alimentation du courant
   d. la haute tension
   e. les fils de l'antenne

   Pousser l'inspection, à tous les endroits, à la recherche des cordes pincées, déplacées ou effilochées. Ne pas changer l'écartement entre composants, et entre composants et le tableau de circuit imprimé. Vérifier que le fil de conduite électrique est en bon état.

6. Les composants, parts (pièces) et/ou fils qui ont été trouvés surchauffés devraient être remplacés avec les composants, pièces et fils s'y reliant avec d'autre qui ont les mêmes spécifications que les originales. De plus, rechercher la cause du surchauffement et/ou des dommages et si nécessaire, prendre les mesures propres pour prévenir tout risque potentiel.

7. **Note sur sûreté de l'appareil**
   Beaucoup de pièces de moniteurs, qu'elles soient électriques ou mécaniques, ont des dispositions de sécurité qui ne sont pas toujours évidentes d'une simple inspection visuelle et la protection qu'elles donnent nécessairement ne pourront être pas obtenues par les remplaçants avec des composants aux voltages ou watts plus élevés.
   Les pièces qui ont des caractéristiques particulières de sécurité sont identifiées avec un trait ⚠ marqué sur les schémas et sont ombragés ou comportent un trait ⚠ sur la liste des pièces. L'utilisation d'un produit substitutif qui n'aurait pas les mêmes caractéristiques comme il est recommandé dans ces données d'entretien pourrait provoquer une décharge électrique, un feu, et/ou d'autres dangers.

USERS MANUAL

CAUTION

RISK OF ELECTRIC SHOCK
DO NOT OPEN

CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER. NO USER-SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

This symbol warns the user that uninsulated voltage within the unit may have sufficient magnitude to cause electric shock. Therefore, it is dangerous to make any kind of contact with any part inside of this unit.

This symbol alerts the user that important literature concerning the operation and maintenance of this unit has been included. Therefore, it should be read carefully in order to avoid any problems.

WARNING

TO PREVENT FIRE OR SHOCK HAZARDS, DO NOT EXPOSE THIS UNIT TO RAIN OR MOISTURE. ALSO DO NOT USE THIS UNIT'S POLARIZED PLUG WITH AN EXTENSION CORD RECEPTACLE OR OTHER OUTLETS, UNLESS THE PRONGS CAN BE FULLY INSERTED. REFRAIN FROM OPENING THE CABINET AS THERE ARE HIGH-VOLTAGE COMPONENTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

DOC compliance Notice

This digital apparatus does not exceed the Class A limits for radio noise emissions from digital apparatus set out in the Radio Interference Regulations of the Canadian Department of Communications.

WARNING

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

Warnings and Safety Precaution

The NEC MultiSync Multimedia monitors XP$_{37}$ and XM$_{37}$ are designed and manufactured to provide long, trouble-free service. No maintenance other than cleaning is required. Use a soft cloth and if necessary, mild detergent. Do not use commercial spray cleaners which may damage the surface. In case of damage, arrange for repairs at an authorized NEC Service Center.

For operating safety and to avoid damage to the unit, read carefully and observe the following instructions.

To avoid shock and fire hazards:

1. Provide adequate space for ventilation to avoid internal heat build-up. Do not cover rear vents or install in a closed cabinet or shelves.
   A cabinet or shelves in which the unit is placed must be maintained below 40℃.
   The unit is equipped with cooling fans on the top. If you enclose the unit in a cabinet or rack, be sure there is adequate space at the top of the unit to allow heated air to rise and escape.
2. Do not use the power cord polarized plug with extension cords or outlets unless the prongs can be completely inserted.
3. Do not expose unit to rain or moisture.
4. Avoid damage to the power cord, and do not attempt to modify the power cord.
5. Unplug unit during electrical storms or if unit will not be used over a long period.
6. Do not open the cabinet which has potentially dangerous high voltage components inside. If the unit is damaged in this way the warranty will be void. Moreover, there is a serious risk of electric shock.
7. Do not attempt to service or repair the unit. NEC is not liable for any bodily harm or damage caused if unqualified persons attempt service or open the back cover. Refer all service to authorized NEC Service Centers.

To avoid damage and prolong operating life:

1. Use only with 120V 60Hz AC power supply. Continued operation at line voltages greater than 120 Volts AC will shorten the life of the unit, and might even cause a fire hazard.
2. Handle the unit carefully when moving and do not drop.
3. Locate set away from heat, excessive dust, and direct sunlight.
4. Protect the inside of the unit from liquids and small metal objects. In case of accident, unplug the unit and have it serviced by an authorized NEC Service Center.
5. Unplug unit before cleaning. Use only a soft cloth and mild detergent. Commercial household sprays and cleaners may damage the CRT surface and cabinet.

ATTENTION

⚠ RISQUE·D'ELECTROCUTION
NE PAS OUVRIR ⚠

MISE EN GARDE: AFIN DE REDUIRE LES RISQUES D'ELECTROCUTION, NE PAS DEPOSER LE COUVERCLE. IL N'Y A AUCUNE PIECE UTILISABLE A L'INTERIEUR DE CET APPAREIL. NE CONFIER LES TRAVAUX D'ENTRETIEN QU'A UN PERSONNEL QUALIFIE.

⚠ Ce symbole a pour but de prévenir l'utilisateur de la présence d'une tension dangereuse, non isolée se trouvant à l'intérieur de l'appareil. Elle est d'une intensité suffisante pour constituer un risque d'électrocution. Eviter le contact avec les pièces à l'intérieur de cet appareil.

⚠ Ce symbole a pour but de prévenir l'utilisateur de la présence d'importantes instructions concernant l'entretien et le fonctionnement de cet appareil. Par conséquent, elles doivent être lues attentivement afin d'éviter des problèmes.

AVERTISSEMENT

AFIN DE REDUIRE LES RISQUES D'INCENDIE OU D'ELECTROCUTION, NE PAS EXPOSER CET APPAREIL A LA PLUIE OU A L'HUMIDITE. AUSSI, NE PAS UTILISER LA FICHE POLARISEE AVEC UN PROLONGATEUR OU UNE AUTRE PRISE DE COURANT SAUF SI CES LAMES PEUVENT ETRE INSEREES A FOND. NE PAS OUVRIR LE COFFRET, DES COMPOSANTS HAUTE TENSION SE TROUVENT A L'INTERIEUR. LAISSER A UN PERSONNEL QUALIFIE LE SOIN DE REPARER CET APPAREIL.

DOC avis de conformation

Le présent appareil numérique n'émet pas de bruits radioélectriques dépassant les limites applicables aux appareils numériques de la classe A prescrites dans le Règlement sur le brouillage radioélectrique édicté par le ministère des Communications du Canada.

Mises en garde et précautions de sécurité

Les moniteurs MultiSync Multimédia XP$_{37}$ et XM$_{37}$ de NEC ont été conçus et fabriqués pour assurer une longue durée de service sans problèmes. Aucun entretien à l'exception du nettoyage n'est nécessaire. Utiliser un chiffon doux et un détergent doux, si nécessaire. Ne pas utiliser des aérosols de nettoyage du commerce qui risquent d'endommager la surface de cet appareil. Si l'appareil est endommagé, confier les travaux de réparation à un centre de service agréé NEC.

Pour un fonctionnement sûr et afin d'éviter d'endommager l'appareil, lire attentivement et respecter les instructions suivantes.

Afin d'éviter tout risque d'électrocution et d'incendie:

1. Réserver un espace libre suffisant pour la ventilation afin d'éviter une accumulation de chaleur interne. Ne pas couvrir les trous d'aération arrière ou installer l'appareil dans un coffret fermé ou sur une étagère.
   Si l'appareil est posé sur un coffret ou une étagère, la température doit être maintenue en dessous de 40°C.
   L'appareil est équipé d'ailettes de refroidissement sur le dessus. Si l'appareil est logé dans un coffret ou sur une étagère, s'assurer qu'il y a un espace libre suffisant pour la dissipation de la chaleur.
2. Ne pas utiliser la fiche polarisée du cordon d'alimentation avec des prolongateurs ou des prises de courant, sauf si les lames peuvent être insérées à fond.
3. Ne pas exposer à la pluie ou à l'humidité.
4. Eviter d'endommager le cordon d'alimentation, et ne pas modifier le cordon d'alimentation.
5. Débrancher l'appareil pendant les tempêtes ou si l'appareil n'est pas utilisé pendant une longue période.
6. Ne pas ouvrir le coffret. Des composants de haute tension se trouvent à l'intérieur. Si l'appareil est endommagé de cette manière, la garantie devient caduque. De plus, il y a risque d'électrocution.
7. Ne pas essayer de réparer ou entretenir l'appareil soi-même. NEC ne saura être tenu pour responsable pour toute blessure ou dommage causé par des personnes non qualifiées qui essayent de réparer ou d'ouvrir le couvercle arrière. Confier toute réparation à un centre de service agréé NEC.

Pour éviter des dommages et prolonger la durée de service de l'appareil:

1. N'utiliser qu'une source d'alimentation de 120 V 60 Hz CA. Le fait d'utiliser l'appareil en continu à des tensions de ligne supérieures à 120 Volts CA réduit sa durée de vie et risque de provoquer un incendie.
2. Manipuler l'appareil avec soin pendant son déplacement et ne pas le faire tomber.
3. Eloigner l'appareil des endroits chauds, très poussiéreux et exposés en plein soleil.
4. Eviter que des liquides et des petits objets métalliques pénètrent à l'intérieur de l'appareil. En cas d'accident, débrancher l'appareil et le confier à un centre de service agréé NEC.
5. Débrancher l'appareil avant le nettoyage. Utiliser seulement un chiffon doux et un détergent doux.
   Des aérosols et produits de nettoyage disponibles dans le commerce risquent d'endommager l'écran et le coffret.

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This manual covers both the XP37 and the XM37 multimedia monitors. The operating procedures are common to both models.

(CAUTION) This CONTENTS's page No. indicate upper right side page or lower right side page of USERS MANUAL.

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Introduction

Introduction to the MultiSync XP$_{37}$/XM$_{37}$

Congratulations on your purchase of NEC' s MultiSync XP$_{37}$ / XM$_{37}$ multimedia monitor which includes Microsoft' s Plug and Play compatibility. Just plug your XP$_{37}$/XM$_{37}$ monitor into a Plug and Play compatible system, and your monitor is automatically ready to run at it' s optimum performance. Other examples of features that enhance MultiSync multimedia monitor performance are the On-Screen Manager(OSM ™) controls and the Intelligent Power Manager(IPM ™) System.

The **Intelligent Power Manager(IPM ™) System** follows the United States government' s Environmental Protection Agency (EPA) guidelines. The IPM System increases the monitor' s life and saves energy and costs by powering down when not in use.

Feature Highlights

The **OSM (On Screen Manager)** controls have made the MultiSync monitor' s Digital Control System easier to use by providing menus on screen. Pressing the PROCEED key turns on OSM. You' ll find it easy to navigate through the menu that appears, and icons show you how the controls work.

IPM (Intelligent Power Manager) is an innovative power saving utility that complies with the EPA' s Energy Star requirements . Energy Star products use 30 watts or less when in the main power saving mode.
When in the maximum power-down mode,.the MultiSync XP$_{37}$/XM$_{37}$ monitor will consume approximately 10% of the total power drawn under normal operation. This innovation adds up to 70% energy savings, longer monitor life, environmental protection, reduced emissions, and reduced air conditioning costs of the work environment.
MultiSync monitors follow the Video Electronics Standards Association (VESA) approved DPMS power-down signaling method. VESA' s Display Power Management Signaling(DPMS) method which is endorsed by the EPA is the power-down process a system should use to communicate to the monitor to save power. Power-down functions can only be utilized with an energy star system or video card which adhere to the VESA DPMS standard. By using the monitor' s horizontal and vertical SYNC signals, the monitor can be prompted into the different IPM modes. The following is the description of the LED indicator for the IPM power saving modes:

Mode	LED Indicator	Power Saving
On	Green	None
Standby	Yellow	Minimum (Quickest Recovery)
Suspend	Orange	Moderate (EPA< 30 Watts, Moderate Recovery)
Off (IPM Mode)	Orange	Maximum (Slowest Recovery)
Off (Power Switch, Off)	No Light	No Power Used (Fully Off)

The MultiSync XP$_{37}$/XM$_{37}$ multimedia monitor incorporates NEC' s famous **multiple frequency technology**. You are provided with a choice of multiple operating platforms and a vast array of graphic standards. Now, many resolution upgrades are possible without a new monitor.
A wide range of graphics standards is supported by the MultiSync XP$_{37}$/XM$_{37}$ multimedia monitor including:

VGA at 640 x 480 • 60, 72**, and 75**Hz
SuperVGA at 800 x 600 • 56*, 60*, 72**, and 75**Hz
XGA and 8514/A at 1024 x 768 • Interlaced 87Hz
1024 x 768 • Non-interlaced 60*
1024 x 768 • 70**, and 75**Hz (XP$_{37}$ only)
1280 x 1024 • 60Hz** (XP$_{37}$ only)
*VESA guideline **VESA standard

And Macintosh resolutions such as:

640 x 480
832 x 624
1024 x 768 (XP$_{37}$ only)
1152 x 870 (XP$_{37}$ only)
1280 x 1024 (XP$_{37}$ only)

**NOTE: The 1024 x 768, 1152 x 870, 1280 x 1024 resolutions are available in full scan and are dependent upon video card signal and timings.
A special cable is required for using with a Macintosh.**

PLUG and PLAY

Plug and Play is the new Microsoft solution with Windows 95 to provide automatic peripheral connections without confusing and time-consuming setup. NEC developed the monitor's Plug and Play capability that allows your Plug and Play compatible system to automatically identify, configure, and optimize the monitor connected to it. The MultiSync XP$_{37}$/XM$_{37}$ multimedia monitor automatically tells the system its identification and capabilities. NEC' s partnership with Microsoft provides you with simple installation, setup, and service.

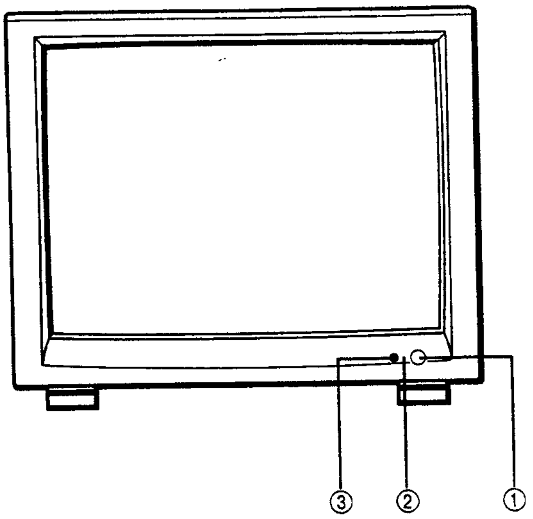
Contents of the Package

The following lists all of the items included in your MultiSync multimedia monitor package. Please save the original box and packing materials for future transportation or shipment of this monitor.

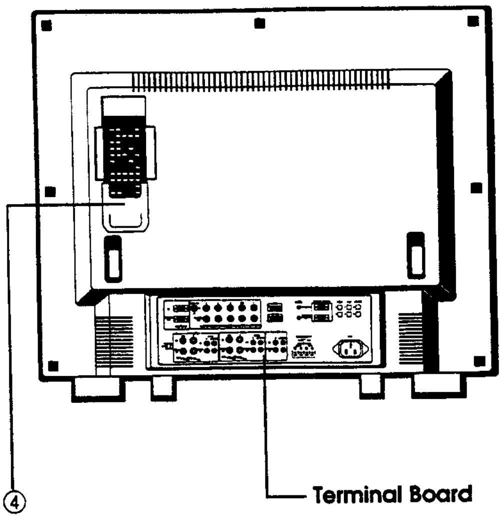
1. MultiSync XP$_{37}$/XM$_{37}$ multimedia monitor
2. Power cord
3. Remote control unit with remote cable and two AA batteries.
4. User' s manual
5. Registration card : Please fill out and return the registration card as soon as possible.

Part Names and Functions

Front View

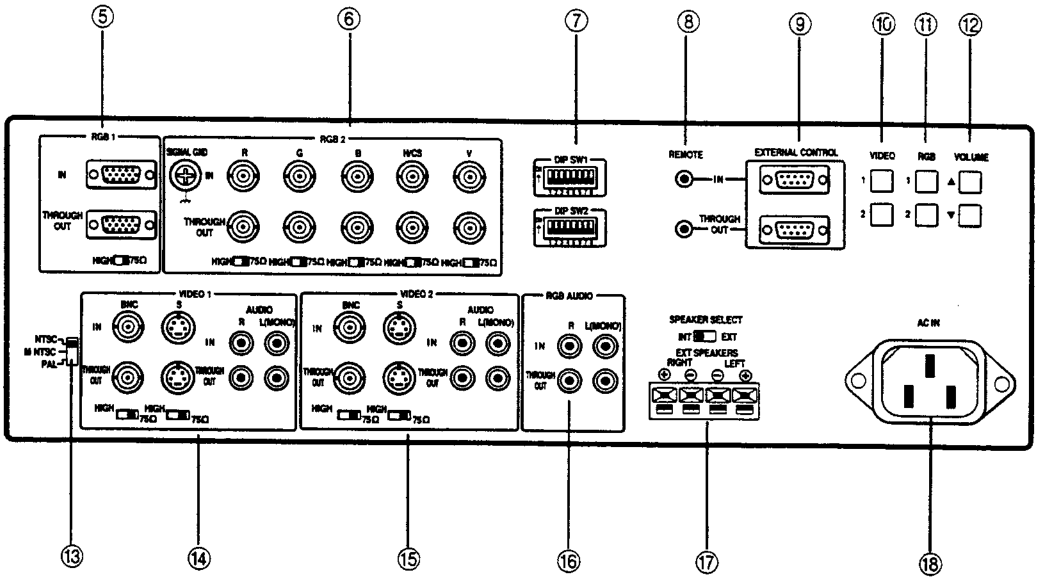


Rear View



① **POWER**	Press to power the monitor on and off.
② **STANDBY ⏻ /POWER Indicator**	Lights green during normal operation. Lights yellow when the monitor is in standby mode.
③ **Remote Sensor Window**	Receives infrared signal from the remote control unit.
④ **Remote Control Holder**	Use this holder to keep the remote control unit.

Terminal Board


⑤
⑥
⑦
⑧
⑨
⑩
⑪
⑫
RGB 1
IN
THROUGH OUT
HIGH 75Ω
RGB 2
SIGNAL GND
IN
R
G
B
H/CS
V
THROUGH OUT
HIGH 75Ω
DIP SW1
DIP SW2
REMOTE
IN
THROUGH OUT
EXTERNAL CONTROL
VIDEO
RGB
VOLUME
1
2
▲
▼
VIDEO 1
VIDEO 2
BNC
S
AUDIO
R
L(MONO)
IN
THROUGH OUT
HIGH 75Ω
NTSC
M NTSC
PAL
RGB AUDIO
SPEAKER SELECT
INT
EXT
EXT SPEAKERS
RIGHT
LEFT
AC IN
⑬
⑭
⑮
⑯
⑰
⑱

⑤ RGB 1

D-SUB 15 PIN IN.....A15 Pin Analog RGB 1 input terminal compatible with computers that have a VGA output signal.

D-SUB 15 PIN THROUGH OUT.....Connect to an RGB INPUT terminal on another monitor.

75 Ω/HIGH Impedance Select Switch.....Set to "75 Ω" during normal operation. Set to "HIGH" when using the D-SUB 15 PIN THROUGH OUT RGB 1 terminal.

⑥ RGB 2

R, G, B, H/CS, and V IN (BNC).....These are analog RGB input terminals. Connect external components with R, G, B, H, and V output terminals to these analog RGB input terminals. Be sure that the RGB connection cable is correctly attached to the corresponding terminals. When connecting devices where the sync signal is an H/V composite signal, connect it to the H/CS terminal.

R, G, B, H/CS, and V THROUGH OUT (BNC)..... Connect to a second monitor's RGB inputs to relay the RGB signal inputs at R, G, B, H/CS, and V IN.

75 Ω/HIGH Impedance Select Switch..... Set to "75 Ω" during normal operation. In multiple connections using R, G, B, H/CS, and V IN and OUT terminals, set to "HIGH" on all but the last monitor. Set to "75 Ω" on the last monitor only.

⑦ DIP Switches

DIP SW 1.....This DIP switch sets various conditions of the monitor. See pages 15 and 16 for more details.

DIP SW 2.....This DIP switch sets Sync. Control and the Intelligent Power Manager. Set all eight pins to the OFF positions during normal operation. See pages 17 and 18 for more details.

⑧ REMOTE IN/OUT..... When the supplied remote control is used in the wired condition, connect the supplied remote cable to the REMOTE IN terminal. The REMOTE OUT terminal is used to connect several monitors together and allows all of the monitors to be controlled by one remote control.

NOTE: Up to 50 monitors can be connected in the serial connection.

⑨ EXTERNAL CONTROLS

EXTERNAL CONTROL IN (D-SUB 9 PIN).....This terminal is used when power ON/OFF, input selection, AUDIO MUTE, PICTURE MUTE, and DEGAUSS are operated externally (by external control). See also page 39 for external control port pin assignments.

NOTE: Select EXT. CONTROL ON by setting pin No. 7 of DIP SW 1 to ON when operating the monitor by external control.

NOTE: When in the EXT. CONTROL mode, the following operations of the supplied remote control are not possible: Power control ON/OFF, Input selection, Audio mute ON/OFF, and Degauss switch ON/OFF.

EXTERNAL CONTROL OUT (D-SUB 9 PIN)..... Connect to a second monitor' s EXTERNAL CONTROL input to relay the signal input at the EXTERNAL CONTROL IN.

The EXTERNAL CONTROL THROUGH OUT terminal is used to connect several monitors together (up to 50) and allows all of the monitors to be controlled by one external control. No. 7 pin (EXT. CONTROL) of DIP SW 1 must be set to the ON position on all of the monitors.

⑩ VIDEO Select Buttons

VIDEO 1.....Press to select the video source that is connected to the VIDEO 1 input terminal (BNC type or S-VIDEO 1 IN).

VIDEO 2.....Press to select the video source that is connected to the VIDEO 2 input terminal (BNC type or S-VIDEO 2 IN).

NOTE: S-VIDEO IN terminals will take preference over VIDEO IN terminals when the video source is connected to each terminal and VIDEO 1 or 2 selected.

⑪ RGB Select Buttons

RGB 1.....Press to select the RGB source that is connected to the RGB 1 input terminal (D-SUB 15 pin type).

RGB 2.....Press to select the RGB source that is connected to the RGB 2 input terminals (BNC type).

⑫ VOLUME ▲▼ Buttons

Press and hold ▲ to increase sound. Press and hold ▼ to decrease sound.

⑬ VIDEO SELECT Switch

Set switch to NTSC, M-NTSC or PAL depending on the selected video signal format. Leave this switch to the NTSC position normally.

⑭ VIDEO 1

VIDEO 1 IN (BNC type).....Connect to a video output of the external source.

S-VIDEO 1 IN.....Connect the S-video source with an S-connector output here.

THROUGH OUT (BNC type).....Connect to a second monitor' s video input to relay the video signal input at VIDEO 1 IN.

THROUGH OUT (S-VIDEO).....Connect to a second monitor' s S-connector input to relay the video signal input at S-VIDEO 1 IN.

75 Ω/HIGH Impedance Select Switch for BNC type.....Set to "75 Ω" during normal operation. In multiple connections using VIDEO 1 IN and THROUGH OUT (BNC type) terminals, set to "HIGH" on all but the last monitor. Set to "75 Ω" on the last monitor only.

75 Ω/HIGH Impedance Select Switch for S-VIDEO type.....Set to "75 Ω" during normal operation. In multiple connections using S-VIDEO 1 IN and THROUGH OUT (S-VIDEO) terminals, set to "HIGH" on all but the last monitor. Set to "75 Ω" on the last monitor only.

AUDIO R IN..... Connect the stereo right channel audio output here.

AUDIO L IN (MONO).....Connect the mono audio or stereo left channel audio output here.

AUDIO R THROUGH OUT.....Connect to a second monitor' s audio right channel input.

AUDIO L THROUGH OUT .....Connect to a second monitor' s audio left channel input.

⑮ VIDEO 2

VIDEO 2 IN (BNC type).....Connect the video source' s output here.

S-VIDEO 2 IN.....Connect the S-video source with an S-connector output here.

THROUGH OUT (BNC type).....Connect to a second monitor' s video input to relay the video signal input at VIDEO 2 IN.

THROUGH OUT (S-VIDEO).....Connect to a second monitor' s S-connector input to relay the video signal input at S-VIDEO 2 IN.

75 Ω/HIGH Impedance Select Switch for BNC type.....Set to "75 Ω" during normal operation. In multiple connections using VIDEO 2 IN and THROUGH OUT (BNC type) terminals, set to "HIGH" on all but the last monitor. Set to "75 Ω" on the last monitor only.

75 Ω/HIGH Impedance Select Switch for S-VIDEO type.....Set to "75 Ω" during normal operation. In multiple connections using S-VIDEO 2 IN and THROUGH OUT (S-VIDEO) terminals, set to "HIGH" on all but the last monitor. Set to "75 Ω" on the last monitor only.

AUDIO R IN.....Connect the stereo right channel audio output here.

AUDIO L IN (MONO).....Connect the mono audio or stereo left channel audio output here.

AUDIO R THROUGH OUT.....Connect to a second monitor' s audio right channel input.

AUDIO L THROUGH OUT.....Connect to a second monitor' s audio left channel input.

⑯ RGB AUDIO

AUDIO R IN.....Connect the audio right channel output of the RGB source.

AUDIO L IN.....Connect the mono audio or stereo left channel output of the RGB source.

AUDIO R THROUGH OUT.....Connect to a second monitor' s audio right channel RGB input.

AUDIO L THROUGH OUT.....Connect to a second monitor's audio left channel RGB input.

⑰ Speakers

SPEAKER SELECT INT/EXT Select Switch.....Set to the INT position for built-in monitor speakers. Set to the EXT position for speakers connected to EXT SPEAKERS terminals.

+ **RIGHT**.....Connect RIGHT speaker positive wire here.

- **RIGHT**.....Connect RIGHT speaker negative wire here.

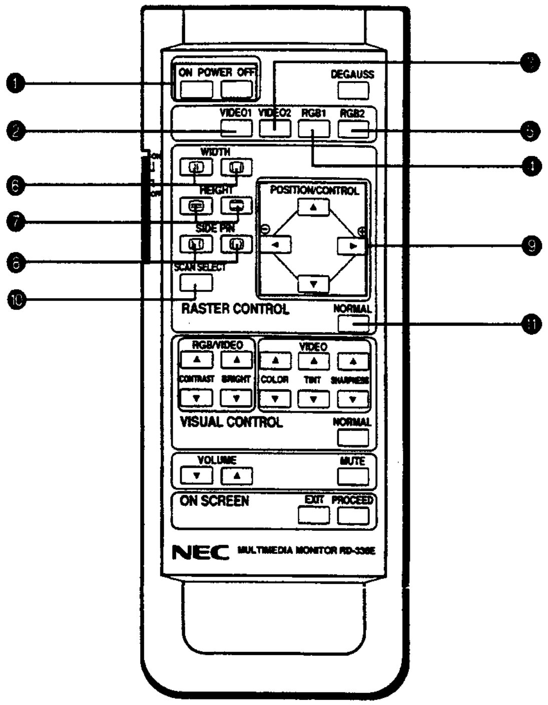
- **LEFT**.....Connect LEFT speaker negative wire here.

+ **LEFT**.....Connect LEFT speaker positive wire here.

⑱ AC Input

Connect the supplied power cord' s three-pin plug here.

Remote Control Unit


❶
❷
❻
❼
❽
❿
❸
❺
❹
❾
⓫
ON POWER OFF
DEGAUSS
VIDEO1
VIDEO2
RGB1
RGB2
WIDTH
HEIGHT
SIDE PIN
SCAN SELECT
POSITION/CONTROL
RASTER CONTROL
NORMAL
RGB/VIDEO
VIDEO
CONTRAST
BRIGHT
COLOR
TINT
SHARPNESS
VISUAL CONTROL
NORMAL
VOLUME
MUTE
ON SCREEN
EXIT
PROCEED
NEC
MULTIMEDIA MONITOR RD-336E

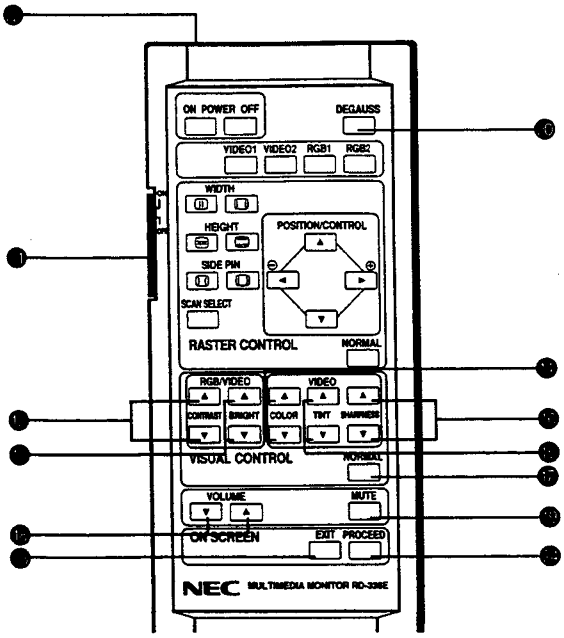
NOTE: When not in use the remote control unit is conveniently stowed in the holder on the rear panel, and the remote cable is bundled into the holder.

● **POWER ON/OFF**	Press POWER ON to turn the monitor on when the STANDBY/POWER indicator is lit yellow. Press POWER OFF to turn the monitor off and the monitor will go into the standby condition.
● **VIDEO 1**	Press to select reception of a conventional component or S-connector component connected to VIDEO 1 IN terminal.
● **VIDEO 2**	Press to select reception of a conventional component or S-connector component connected to VIDEO 2 IN terminal.
● **RGB1**	Press to select reception of a component connected to RGB 1 IN terminal.
● **RGB 2**	Press to select reception of a component connected to RGB 2 IN terminal.

Raster Control

● **WIDTH (▯ / ▯)**	Adjusts the horizontal size of the image from narrower to wider.
● **HEIGHT (▭ / ▭)**	Adjusts the vertical size of the image from shorter to taller.
● **SIDE PIN (▯ / ▯)**	Adjusts the curvature of the edges of the left and right side of the display image either inward or outward. The image should be adjusted to attain a straight line on the left and right sides.
● **POSITION/CONTROL (▲/▼/◀/▶)**	Adjusts the vertical position of the image up and down, and the horizontal position of the image from left to right.
CONTROL (⊖ / ⊕)	Moves the bar in the ⊕ or ⊖ direction to increase or decrease the adjustment in an OSM submenu.
CONTROL(▲ / ▼)	Moves the arrow up or down to select one of the controls.
● **SCAN SELECT**	Each time this key is pressed, the picture size switches from OVER SCAN for large size to UNDER SCAN for small size and vice versa. Normally select OVER SCAN for video display and UNDER SCAN for RGB display.
● **NORMAL**	This key resets the raster adjustment settings of user changeable memory and recalls the factory preset data.

NOTE: This can be done to only the signal having the factory preset data.



Visual Control

● **RGB/VIDEO** **CONTRAST (▲ / ▼)**	Adjusts the image brightness in relation to the background. Press and hold ▲ for higher contrast. Press and hold ▼ for lower contrast.
● **RGB/VIDEO** **BRIGHT (▲ / ▼)**	Adjusts the overall image and screen brightness. Press and hold ▲ for a brighter picture. Press and hold ▼ for a darker picture.
● **COLOR (▲ / ▼)**	Adjusts color intensity of VIDEO display. Press and hold ▲ for more color saturation. Press and hold ▼ for less color saturation.
● **TINT (▲ / ▼)**	Adjusts red and green values of VIDEO display. Press and hold ▲ for a greener tint. Press and hold ▼ for a redder tint. This control does not work for the PAL signal.
● **SHARPNESS (▲ / ▼)**	Adjusts picture detail of VIDEO display. Press and hold ▲ for a sharper picture. Press and hold ▼ for a softer picture.

NOTE: The COLOR, TINT and SHARPNESS keys work for the VIDEO display only.

NOTE: The VISUAL CONTROL storing operation is effective only for one input (VIDEO1, VIDEO2, RGB1 or RGB2).

● **NORMAL**	This key resets the picture adjustment settings of user changeable memory and recalls the factory preset data.

NOTE: The CONTRAST, BRIGHT, COLOR, TINT and SHARPNESS adjustment level are factory preset at the optimum position.

● **VOLUME (▼ / ▲)**	Adjusts the volume. Press and hold ▼ to decrease sound. Press and hold ▲ to increase sound.
● **MUTE**	Press to cancel sound ; press again to restore sound.

NOTE: The other ways to restore sound are to press POWER ON, then OFF and to press VOLUME keys on the remote control unit.

● **DEGAUSS**	Press to demagnetize the picture tube in the manual operation. See also page 29.
● **Backlight Switch**	Set to ON to light up keys from the inside of the remote control panel. This is useful when the remote control unit is used in a darkened room.

NOTE: The backlight key characters may be invisible in a bright-lit room. Make sure that the backlight switch is OFF when the remote control unit is not used. If no button operation is made within 30-seconds when the backlight is lit in the wireless condition, the backlight go off automatically. To turn the backlight on again, set the switch to the OFF position, then set it to the ON position.

● **Remote Jack**	Insert the plug of the supplied remote cable when using the supplied remote control unit in the wired condition. Connecting the monitor and the remote control unit with the supplied remote cable turns on the backlight independent of the backlight switch setting when the monitor is powered on.
● **EXIT**	Press to exit the OSM controls in the main menu. Press to exit to the previous menu in a submenu.
● **PROCEED**	Press to access OSM. Press to proceed to the selected menu choice (indicated by the arrow). Press to move the arrow down to select one of the choices.

NOTE:

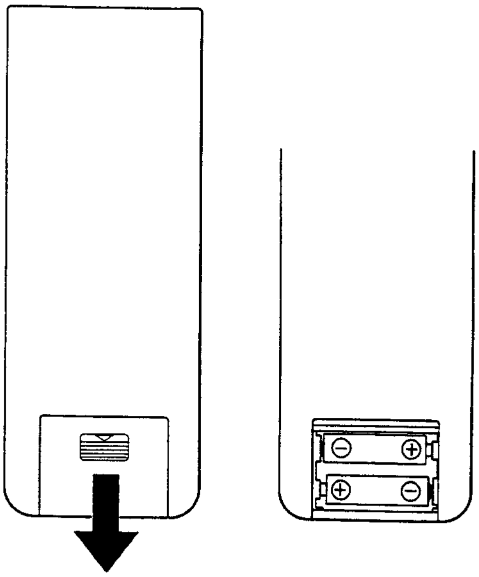
- **Other control keys than POSITION/CONTROL + / -, ▲ / ▼, and NORMAL are not available during the OSM screen display.**
- **Other control keys than POSITION/CONTROL + / -, ▲ / ▼, and NORMAL can be directly to access to each control. OSM controls are not possible in that case.**

Battery Installation and Replacement

The remote control is powered by two 1.5V AA batteries.

To install or replace batteries:

1. Turn the remote control unit upside down.
2. Press down on the battery compartment grip and slide the compartment in the direction of the arrow.
3. Install the two new batteries, making sure that their polarity matches the (+) (-) diagrams inside the battery compartment. Incorrect polarity could damage the unit.
4. Close the battery compartment cover.



Remote Control Cautions

- Do not drop or mishandle the remote control unit.
- Do not get the remote control unit wet. If the remote gets wet, wipe it dry immediately.
- Avoid heat and humidity.
- When not using the remote control unit for a long period, remove the batteries.
- Do not use new and old batteries together, or use different types together.
- Do not take apart the batteries, heat them, or throw them into a fire.
- When using the remote control unit in the wireless condition, be sure to unplug the remote cable from the REMOTE IN terminal on the monitor.

Operating Range

- The infrared signal operates by line-of-sight up to a distance of approximately 20 feet and within a 60 degree angle of the Remote Sensor Window.
- The monitor will not function if there are objects between the Remote and the Sensor Window or if strong light falls on the Sensor Window. Weak batteries will also prevent the monitor from operating properly.

Functions of DIP SW

Functions and Settings of DIP SW 1

This DIP switch sets various conditions of the monitor.

No.1
No.2
No.3

POWER ON MODE SET

MODE	DIP SWITCH		
	No.1	No.2	No.3
DEFEAT	OFF	---	---
VIDEO 1	ON	OFF	OFF
VIDEO 2	ON	ON	OFF
RGB 1	ON	OFF	ON
RGB 2	ON	ON	ON

No.4	ON : 3.58/4.43MHz TRAP ON OFF : 3.58/4.43MH TRAP OFF
No.5	ON : ON SCREEN DISPLAY ON OFF : ON SCREEN DISPLAY OFF
No.6	ON : VIDEO BANDWIDTH NARROW OFF : VIDEO BANDWIDTH NORMAL
No.7	ON : EXT CONTROL ON OFF : EXT CONTROL OFF
No.8	ON : WIRERESS REMOTE CONTOROL ON OFF : WIRERESS REMOTE CONTOROL OFF

Pins No. 1, 2 and 3 (POWER ON MODE SET)
Sets the monitor to default to any one of its inputs each time the monitor is turned on. See table on the above.

This function does not work when the pin No. 1 is set to the OFF position. The last selected input will be stored.

Pin No. 4 (3.58/4.43 MHz TRAP Adjustment)
Set switch to OFF during normal operation. Set switch to ON when the input signal has small dot interference (similar to snow) over the screen.

NOTE:This function works only for VIDEO signals.

Pin No. 5 (ON SCREEN DISPLAY)
When this switch is set to ON, the On Screen Manager can be accessed.

Pin No. 6 (VIDEO BANDWIDTH Select)
Set switch to the OFF (NORMAL) position during normal operation.
Set switch to the ON (NARROW) position when the moire pattern appears on the screen noticeably. It will reduce moire pattern.

Pin No. 7 (EXT. CONTROL)
When this switch is set to ON, the External Control function is activated. See page 39 for pin assignments.

Pin No. 8 (WIRELESS REMOTE ON/OFF)
When this switch is set to ON, the monitor can be controlled by the wireless remote control unit.

Functions and Settings of DIP SW 2

This DIP switch is used for Sync. Control and Intelligent Power Manager.
Set all eight pins to the OFF position during normal operation.

No.1 **No.2**	SYNC. CONTROL

MODE	DIP SWITCH	
	No.1	No.2
AUTO CONTROL (Sep, Comp, Sync on G)	OFF	OFF
MANUAL 1 (Comp. Sync)	OFF	ON
MANUAL 2 (Sync. on G)	ON	OFF
UNUSED	ON	ON

No.3	Not Used
No.4	Not Used
No.5	Not Used
No.6	Not Used
No.7	Not Used
No.8	ON : INTELLIGENT POWER MANAGER ON OFF: INTELLIGENT POWER MANAGER OFF

Sync. Control (Pins Nos 1 and 2)
These pins set Sync. Control.
Set both pins to OFF position during normal operation.
Pin No.1 (Sync. on Green Control)
Set pin No.1 to the ON position and pin No. 2 to the OFF position when sync on green signals are necessary for synchronization with an external component.
Pin No.2 (Composite Sync Control)
Set pin No. 2 to the ON position and pin No. 1 to the OFF position for H/V composite sync signals.

NOTE: When pins Nos. 1 and 2 are set to the OFF positions, the monitor automatically determines if the input signal is separate sync, composite sync or G-sync signal in this order.

Pin No. 8 (Intelligent Power Manager)
This function saves power.
When Intelligent Power Manager control is on:
When no horizontal sync. signal is present, the STANDBY/POWER indicator is lit yellow.
When no vertical sync. signal is present, the STANDBY/POWER indicator is lit orange.
When neither horizontal nor vertical sync. signal is present, the STANDBY/POWER indicator is lit orange.

NOTE: The Intelligent Power Manager works only for the RGB input. If selecting the VIDEO input, or when connecting to no signal source, the Intelligent Power Manager does not work.

Installation

External Component Connections

The NEC MultiSync XP$_{37}$/XM$_{37}$ multimedia monitor is designed for convenient installation with a wide variety of audio, the latest video components and many data processing devices equipped with analog RGB output.

BNC jack terminals (VIDEO 1 and VIDEO 2) are provided for connection to two separate external video components, plus S-VIDEO IN (VIDEO 1 and VIDEO 2) terminals for connection to S-connector VCRs.

THROUGH-OUT (VIDEO 1 and VIDEO 2) are bridged output terminals that provide direct signal output of the component connected to VIDEO 1 IN, VIDEO 2 IN, S-VIDEO 1 IN or S-VIDEO 2 IN.

A D-SUB 15 PIN RGB multi-signal input connector automatically scans all frequencies between 24 kHz and 78 kHz (50kHz : XM$_{37}$). It is compatible with the IBM PS/2 and clones, and other IBM Compatible Graphics adapters plus any other data processing devices equipped with analog RGB output.

Video Signal Connections

VIDEO 1 INPUT Connections

1. Connect the external component video output to VIDEO 1 IN.
2. Connect the external component mono audio or stereo left channel audio output to L AUDIO (MONO).
3. Connect the external component stereo right channel audio output to R AUDIO.
4. Press VIDEO 1 on the terminal board or the VIDEO 1 key on the remote control unit.

NOTE: S-VIDEO IN terminals will take preference over VIDEO IN terminals when a component is connected to each terminal and VIDEO 1 or 2 selected.

NOTE: In the U.S.A. the standard video signal format is NTSC, therefore the VIDEO SELECT switch should normally be set to the NTSC position.

S-VIDEO 1 INPUT Connections

1. Connect the external components with an S-connector output to S-VIDEO 1 IN.
2. Connect audio terminals as explained in VIDEO 1 INPUT connection previously.
3. Press VIDEO 1 on the terminal board or the VIDEO 1 key on the remote control unit.

VIDEO 2 INPUT Connections

1. Connect the external component video output to VIDEO 2 IN.
2. Connect the external component mono audio or stereo left channel audio output to L AUDIO (MONO).
3. Connect the external component stereo right channel audio output to R AUDIO.
4. Press VIDEO 2 on the terminal board or the VIDEO 2 key on the remote control unit.

S-VIDEO 2 INPUT Connections

1. Connect the external component with an S-connector output to S-VIDEO 2 IN.
2. Connect audio terminals as explained in VIDEO 2 INPUT connections previously.
3. Press VIDEO 2 on the terminal board or the VIDEO 2 key on the remote control unit.

THROUGH OUT (VIDEO 1) Connections

1. Connect THROUGH OUT 1 BNC or S-VIDEO 1 OUT to external components to relay the signal input at VIDEO 1 IN, or S-VIDEO 1 IN.
2. Connect the external component mono audio or stereo left channel audio input to L AUDIO.
3. Connect the external component stereo right channel audio input to R AUDIO.
4. Set the 75Ω/HIGH impedance select switch of the corresponding input signal (BNC, S-VIDEO) on all but the last monitor to "HIGH" position. On only the last monitor set it to "75Ω" position.

THROUGH OUT (VIDEO 2) Connections

1. Connect THROUGH OUT 2 BNC or S-VIDEO 2 OUT to external component to relay the signal input at VIDEO 2 IN or S-VIDEO 2 IN.
2. Connect the external component mono audio or stereo left channel audio input to L AUDIO.
3. Connect the external component stereo right channel audio input to R AUDIO.
4. Set the 75Ω/HIGH impedance select switch of the corresponding input signal (BNC, S-VIDEO) on all but the last monitor to "HIGH" position. On only the last monitor set it to "75Ω" position.

NOTE: The connection of three XP$_{37}$/XM$_{37}$ monitors or more with THROUGH OUT (VIDEO 1 or 2) terminals may degrade image quality.

RGB Signal Connections

RGB 1 INPUT Connections

D-SUB 15 Pin RGB Multi Signal Connector.

1. Connect external components or computers having RGB output to the D-SUB 15-Pin connector.
2. Connect the external RGB component mono audio or stereo left channel audio output to L RGB AUDIO IN (MONO).
3. Connect the external RGB component stereo right channel audio output to R RGB AUDIO IN.

RGB 2 INPUT Connections

Connect external components with R.G.B.H and V output to the R.G.B.H/CS and V analog input terminals. If using a component with a composite horizontal and vertical sync output, connect it to the H/CS terminal.

NOTE: "Plug and Play" is not available during use of the RGB 2 BNC terminals.

NOTE: The SIGNAL GND terminal on the terminal board is provided to reduce interference during use of an RGB signal cable.
When using the RGB 2 IN terminals with a five BNC shieding coaxial cable having the shielding wire, connect the end of the shielding wire of the five BNC coaxial cable to the SIGNAL GND terminal. Failure to do this may cause interference to the monitor.

THROUGH OUT (RGB 1) Connections

Monitor Connection (Optional)

Connect D-SUB 15 PIN THROUGH OUT to an RGB input connector of other monitors.

THROUGH OUT (RGB 2) Connections

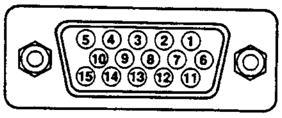
1. Connect the R.G.B.H/CS and V THROUGH OUT terminals to relay the signal input at the R.G.B.H/CS and V IN terminals.
2. Set all the 75Ω/HIGH impedance select switches on all but the last monitor to "HIGH" position. On only the last monitor set all of them to "75Ω" position.

NOTE: The connection of three XP_{17}/XM_{17} monitors or more with THROUGH OUT (RGB 1 or 2) terminals may degrade image quality.

NOTE: "Plug and Play" is available only for the monitor connected directly to a personal computer with the D-Sub 15 PIN IN RGB connector. Therefore, "Plug and Play" does not work for monitors connected with the THROUGH OUT terminal. This is because only the RGB video, the horizontal, or the vertical sync. signal is output from the THROUGH OUT terminals.

D-Sub 15 Pin RGB Signal Composition

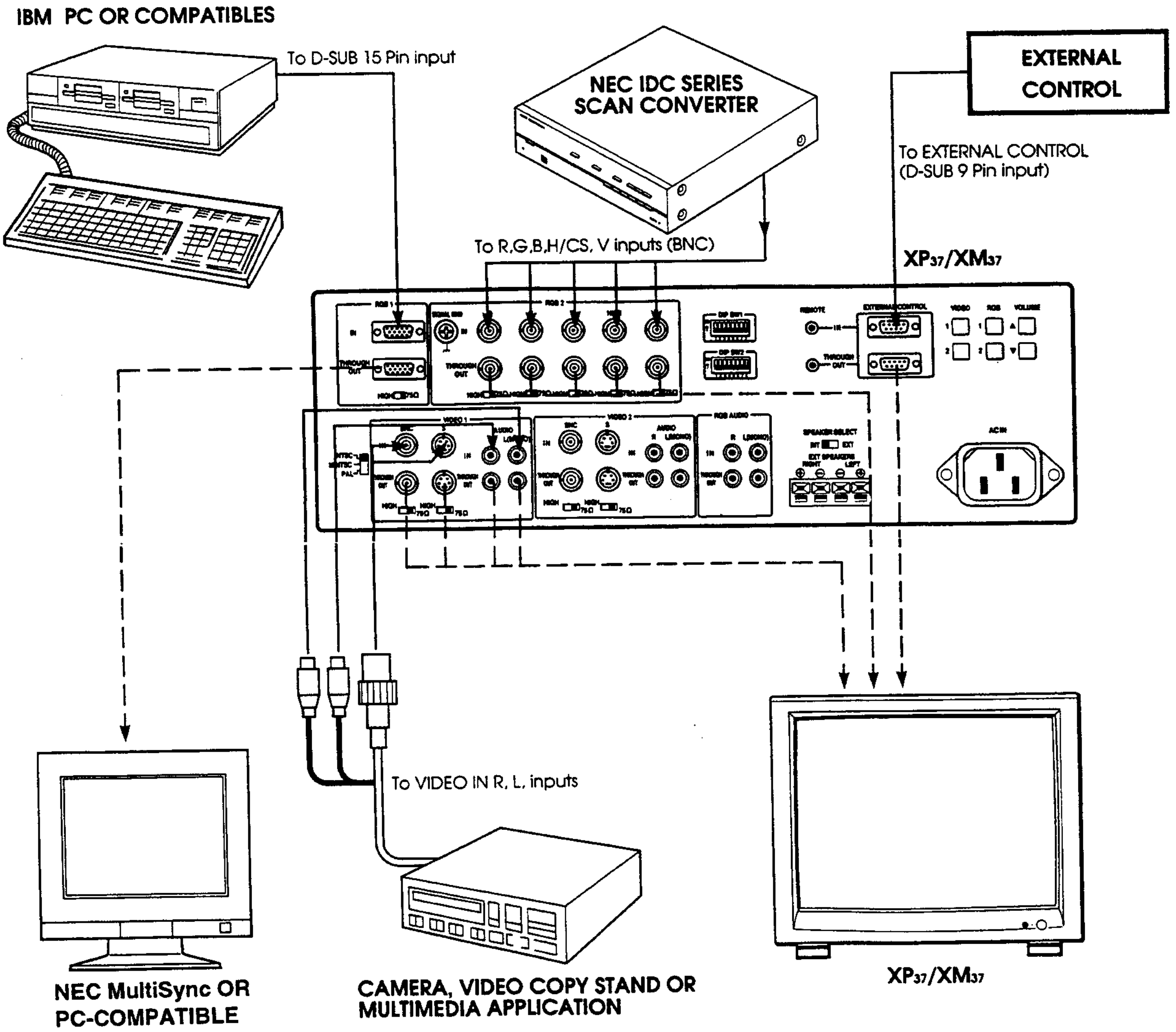
Pin Assignments and Signal Levels for 15 pin RGB (Analog)



Pin No.	Signal to be connected [illegible]
1	RED
2	GREEN or Sync. on Green
3	BLUE
4	GND
5	GND
6	RED Return (GND)
7	GREEN Return (GND)
8	BLUE Return (GND)
9	No Connection
10	SYNC Return (GND)
11	GND
12	Bi-directional DATA (SDA)
13	H. or Composite sync
14	V.SYNC (VCLK)
15	Data Clock

Signal level
Video signal : 0.7 Vp-p (analog)
Sync. signal : TTL level

Typical Connection Example


IBM PC OR COMPATIBLES
To D-SUB 15 Pin input
NEC IDC SERIES
SCAN CONVERTER
EXTERNAL
CONTROL
To EXTERNAL CONTROL
(D-SUB 9 Pin input)
To R,G,B,H/CS, V inputs (BNC)
XP37/XM37
To VIDEO IN R, L, inputs
NEC MultiSync OR
PC-COMPATIBLE
CAMERA, VIDEO COPY STAND OR
MULTIMEDIA APPLICATION
XP37/XM37

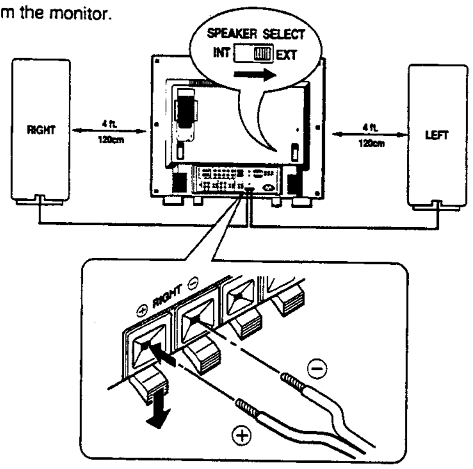
External Speaker Connections

External speakers may be connected to the monitor to reproduce sound from VIDEO 1, VIDEO 2, RGB 1 or RGB 2 signal sources.

External speakers may be connected directly to the EXTERNAL SPEAKERS terminals or indirectly by connecting a stereo system amplifier to the audio outputs.

WARNING: Speakers that are installed next to the monitor must be shielded against electromagnetic radiation which can cause color distortion in the video tube and is not covered under the warranty.

If non-shielded speakers are used, they must be located a minimum of 4 feet away from the monitor.

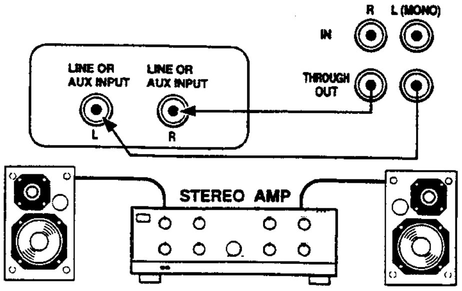


CAUTION: Unplug the monitor and all connected components before connecting external speakers. Use only speakers with 8-ohm impedance and a power output rating of 5 watts or more.

To connect external speakers directly to the monitor:

1. Strip the ends of the speaker wires.
2. Press down a button below the EXTERNAL SPEAKERS terminals, insert the speaker wire and release the button to secure a speaker wire connection:
   [a] Connect the right speaker (located at right side of the monitor when viewed from the front) positive (+) wire to RIGHT +.
   [b] Connect the right speaker negative (-) wire to RIGHT -.
   [c] Connect the left speaker negative (-) wire to LEFT -.
   [d]Connect the left speaker positive wire (+) to LEFT +.
3. Set SPEAKER SELECT switch at EXT.

XP$_{37}$/XM$_{37}$'s VIDEO or
RGB AUDIO L and R outputs



To connect the monitor to stereo system speakers:

1. Connect L AUDIO output to the stereo amplifier L AUX input.
2. Connect R AUDIO output to the stereo amplifier R AUX input.
3. Set SPEAKER SELECT switch at EXT to use external speakers only. For center channel audio fill, set SPEAKER SELECT at INT for sound from both monitor and external speakers.

IMPORTANT: Do not connect speakers to both the monitor EXTERNAL SPEAKERS terminals and to the stereo amplifier. This could damage both the monitor and the speakers.

Controls/Adjustments

Power

1. Plug in the power cord to an electrical outlet to connect power.
2. Press POWER to turn the monitor on.
3. Press POWER again to turn the monitor off.

   Press the POWER OFF key on the remote control unit to turn the monitor off when the monitor is turned on.

   The monitor will go into the standby condition and the STANDBY/POWER indicator will light up yellow.

   Press the POWER ON key on the remote control unit to turn the monitor on when the monitor is in the standby condition. The STANDBY/POWER indicator will light up green.

Video Signal Input Settings

Video Input Selection

Press the desired input selection key (VIDEO 1 or VIDEO 2) on the remote control unit or the monitor.

NOTE: The VIDEO SELECT switch should normally be set to the NTSC position.

NOTE: During VIDEO input, set the 75Ω/HIGH switch to "75Ω" if VIDEO THROUGH OUT is not being used.

Video Signal, Picture Adjustments

1)To adjust:

   a. CONTRAST

   Adjust the contrast of video display.

   b. BRIGHT

   Adjust the brightness of video display.

   c. COLOR

   Adjust the color intensity of video display.

   d. TINT

   Adjust red and green values of video display.

   e. SHARPNESS

   Adjust picture detail of video display.

2)Adjust the picture width, height, and side pin-cushion.

3)Adjust the picture position.

To reset the stored adjustment data and recall the factory preset data: Press the NORMAL keys.

NOTE: Select the over scan mode for VIDEO display.

NOTE: In the U.S.A. the standard video signal format is NTSC, therefore the VIDEO SELECT switch on the terminal board should normally be set to the NTSC position.

RGB Signal Input Settings

RGB 1 Signal Input

Proceed as follows for correct setting of the monitor when input is via D-SUB 15 Pin (ANALOG) terminal.

Connect IBM PC or Macintosh to the D-SUB 15 Pin terminal, and press RGB 1.

RGB 2 Signal Input

When using with a scan converter such as IDC-1000 and IDC-2000.

1. Connect the R, G, B, H/CS and V terminals on the terminal board to the outputs of the IDC-1000 or IDC-2000.
2. Set all of the 75Ω/HIGH Impedance select switches to "75Ω".
3. Press the RGB 2 key.

RGB Signal, Picture Adjustments

1. a)Adjust the contrast of RGB display.
   b)Adjust the brightness of RGB display.
2. Adjust the picture width, height and side pin-cushion.
3. Adjust the picture position.
   See "Signal Identification for Raster Preset" on pages 47 and 48.

NOTE: To reset the stored adjustment data and recall the factory preset data, press the NORMAL key on the remote control unit.

NOTE: Over adjusting the POSITION Up/Down may cause a picture to distort. If this happens, readjust the picture so that the distortion is not seen.

Volume Control

1. Adjust the volume by pressing the VOLUME keys (▼/▲).
2. To cancel sound, press the MUTE key on the remote control unit; press again to restore sound.

Automatic Degaussing

The earth's magnetic field and other magnetic sources can magnetize a color picture tube causing patches of impure colors. This monitor automatically demagnetizes the picture tube for 5 seconds each time the monitor is switched on. Sometimes during transportation a severe magnetic field can be encountered which may require demagnetizing to clear the problem. Also, if powered on for extended periods of time, magnetic fields can be produced by the CRT itself, causing color impurities. In these cases, use the DEGAUSS key once to demagnetize the picture tube. Pressing this key once demagnetizes the picture tube for 5 seconds.

CAUTION: Please allow a minimum of 30 minutes to elapse between uses of the DEGAUSS key, when not switching from mode to mode. Do not hold the key down continuously to avoid decreasing the life of the degauss circuitry.

OSM™ Controls

NEC's new OSM, or On-Screen Manager, System offers the ultimate form of monitor controls. Keys on the remote control unit allow you to easily navigate through menus and adjust controls. As you chose controls, the moving icon shows you what the chosen control will do. These pictures give you immediate understanding of the controls.

OSM controls include extended controls such as Size, Position, Side Pin cushion, Rotation, Alignment, Vertical Linearity, Scan Select and other OSM utilities. Adjustments are saved instantly. The currently addressed control can be reset to factory settings by pressing the NORMAL key.

OSM keys on the remote control unit function as follows:

PROCEED : accesses the OSM controls.
-in the main menu: proceeds to the selected menu choice.
-in a submenu: proceeds to the control in that submenu.

EXIT : in the main menu: exits the OSM controls.
- in a submenu: exits to the OSM main menu.

POSITION CONTROL up/down : moves the arrow up or down to select one of the controls.

POSITION CONTROL-/+ : in the main menu: has no function.
-in a submenu: moves the bar in the + or - direction to increase or decrease the adjustment.

NORMAL : resets the currently selected control to the factory setting.
-in the main menu: resets all the controls within the selected menu.
-in a submenu: resets the selected control.

Typical OSM windows have the following elements:

arrow : indicates the selected menu or control.

moving icon : provides a quick moving illustration of what the control will do (also indicates the direction of control when adjusting).

scroll bar : indicates direction of adjustment.

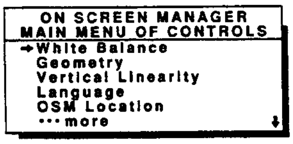
numeric reading : provides a number to remember, record or compare a specific setting.

Accessing OSM
Press the PROCEED key.

Turning off OSM
Press the EXIT key when in the main menu ; press the EXIT key twice when in submenus.

OSM Menus

Main Menu
On-Screen Manager' s main menu of Controls gives you an overview of the selection of controls available.


ON SCREEN MANAGER
MAIN MENU OF CONTROLS
→White Balance
Geometry
Vertical Linearity
Language
OSM Location
••• more

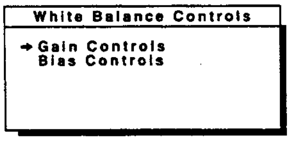
The arrow in the bottom or upper right corner indicates further choices are available. Use the Up or Down control keys to scroll through all of the options.

While in the main menu, the keys on the remote control unit work as follows:

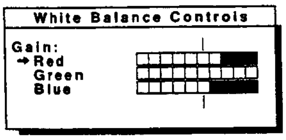
POSITION CONTROL +/- (Left/Right)	: has no function.
POSITION CONTROL▲/▼(Up/Down)	: proceeds to the selected menu choice.
EXIT	: exits the OSM controls.
PROCEED	: proceeds to the next control in the submenu.
NORMAL	: resets all the controls within the selected menu.

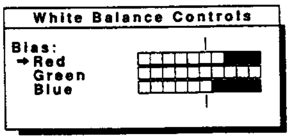
NOTE: The NORMAL function is not needed in the OSM Turn Off Time, Language Select menus, and Volume Control.

White Balance Controls
The White Balance controls allow you to adjust the white balance.


White Balance Controls
→Gain Controls
Bias Controls

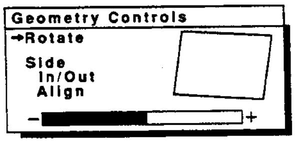
POSITION CONTROL Up/Down	: moves the arrow up or down to select either Gain or Bias controls.
PROCEED	: proceeds to the adjust menu.
EXIT	: exits to the main menu.
NORMAL (VISUAL)	: resets the current white balance controls to the factory setting.


White Balance Controls
Gain:
→Red
Green
Blue

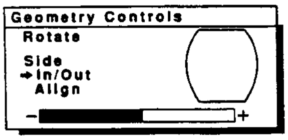

White Balance Controls
Bias:
→Red
Green
Blue

POSITION/CONTROL Up/Down	:moves the arrow up or down to select one of the choices.
POSITION/CONTROL +/-	:moves the bar to increase or decrease the adjustment.
EXIT	:exits to the submenu.
RESET	:resets the current selected control to the factory setting.

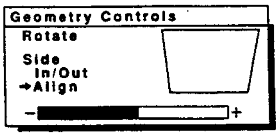
Geometry Controls
The Geometry Controls allow you to adjust the curvature or angle of the sides of your display.


Geometry Controls
→Rotate
Side
In/Out
Align
–
+

Rotate (raster rotation)	:rotates the entire display clockwise or counter clockwise.


Geometry Controls
Rotate
Side
→In/Out
Align
–
+

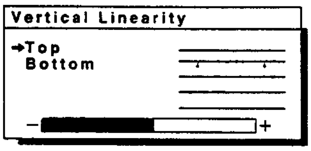
Side In/Out (pin cushion)	:increases or decreases the curvature of the sides either inward or outward.


Geometry Controls
Rotate
Side
In/Out
→Align
–
+

Side Align (trapezoidal)	: increases or decreases the bottom of the screen to be the same as the top. Note on Controls in the Geometry Controls Menu:
EXIT	: exits to the main menu.
POSITION/CONTROL Up/Down	: moves the arrow up or down to select one of the choices.
POSITION/CONTROL+/-	: moves the bar + or - direction to increase or decrease the adjustment.
PROCEED	: proceeds to the next control in the submenu.
NORMAL (RASTER)	: resets the current selected control to the factory setting.

Vertical Linearity

The V-Linear control allows you to adjust the spacing of the areas on the screen. The object of this control is to ensure that a one-inch circle is a true one-inch circle where ever it is drawn on the screen.


Vertical Linearity
→Top
Bottom
−
+

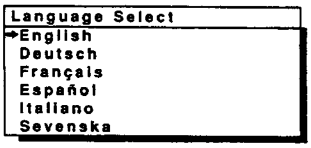
The best way to determine the vertical linearity is as follows:

- draw equally spaced horizontal lines using a drawing application that has a ruler.
- use the Vertical Linearity Top control to adjust the spacing between the lines near the top of your screen.
- use the Vertical Linearity Bottom control to adjust the lines near the bottom of your screen.

POSITION/CONTROL +/- : increases or decreases the spacing between the lines
EXIT : exits to the main menu.
NORMAL (RASTER) : resets the current selected control to the factory setting.

Language Select

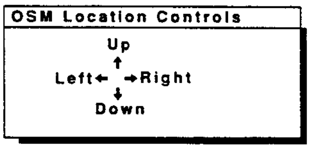
OSM Menus are available in six languages.


Language Select
→English
Deutsch
Français
Español
Italiano
Sevenska

POSITION/CONTROL +/- : moves the arrow up or down to select one of the six languages.
EXIT : exits to the main menu.

OSM Location Control

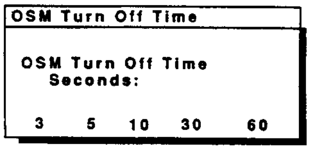
You can choose where you would like OSM image to appear on your screen. Selecting OSM location allows you to manually adjust the OSM menu left, right, up, or down.


OSM Location Controls
Up
Left←
→Right
Down

POSITION/CONTROL Up/Down : moves the OSM menu up or down.
POSITION/CONTROL +/- : moves the OSM menu right or left.
EXIT : exits to the main menu.
NORMAL (RASTER) : resets the current selected control to the factory setting.

OSM Turn Off Time

The OSM menu will stay on as long as it is in use. In the OSM Turn Off Time submenu, you can select how long the monitor waits after the last touch of a key to shut off the OSM menu. The preset choices are 3, 5, 10, 30, and 60 seconds. Note that 30 seconds is the factory preset.

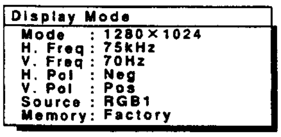

OSM Turn Off Time
OSM Turn Off Time
Seconds:
3
5
10
30
60

POSITION/CONTROL +/- : selects the preset time in increasing or decreasing order.
EXIT : exits to the main menu.

Display Mode

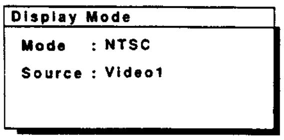
Display Mode provides you information about the current resolution display and technical data including the horizontal and vertical frequency.

RGB



Mode : 1280×1024
H. Freq : 75kHz
V. Freq : 70Hz
H. Pol : Neg
V. Pol : Pos
Source : RGB1
Memory : Factory

VIDEO

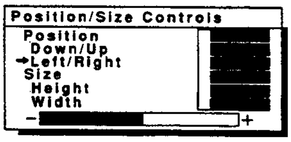


Mode : NTSC
Source : Video1

Mode : indicates the resolution of the current input signal (dot x line).
H. Freq : indicates the horizontal frequency of the current input signal.
V. Freq : indicates the vertical frequency of the current input signal.
H. Pol : indicates the polarity of the horizontal sync signal.
V. Pol : indicates the polarity of the vertical sync signal.
Neg : indicates the polarity is negative.
Pos : indicates the polarity is positive.
Source : indicates the current input source.
Memory : indicates the memory area.
EXIT : exits to the main menu.

Position/Size Controls

The Position/Size controls allow you to adjust the position and size of the image.



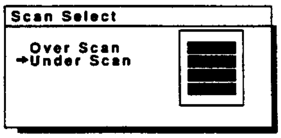
Position Down/Up : moves the image vertically up or down.
Position Left/Right : moves the image horizontally left or right.
Size Height : increases or decreases the vertical size of the image (taller or shorter).
Size Width : increases or decreases the horizontal size of the image (wider or narrower).

Note on the keys in Position/Size menus:

POSITION/CONTROL Up/Down : moves the arrow up or down to select one of the choices.
POSITION/CONTROL +/- : moves the bar to increase or decrease the adjustment.
EXIT : exits to the main menu.
NORMAL (RASTER) : resets the current menu control to the factory setting.

Scan Select

The Scan Select allows you to select either Over Scan (for VIDEO display) or Under Scan (for RGB display).



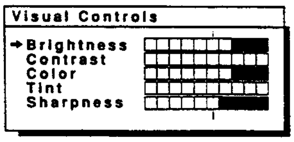
POSITION CONTROL Up/Down : moves the arrow up or down to select either Over Scan or Under Scan mode.
EXIT : exits to the main menu.

Visual Controls

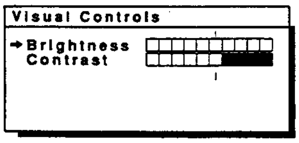
The Visual controls allow you to adjust the picture controls such as brightness, contrast, color, tint, and sharpness.

NOTE: The color, tint, and sharpness controls are not available in the RGB mode and the tint not available in the PAL mode.

VIDEO



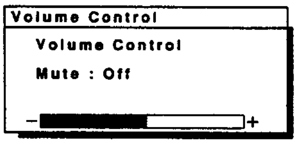
RGB



POSITION/CONTROL Up/Down : moves the arrow up or down to select one of the choices.
POSITION/CONTROL +/- : moves the bar to increase or decrease the picture adjustment.
EXIT : exits to the main menu.
NORMAL (VISUAL) : resets the current selected control to the factory setting.

Volume Control

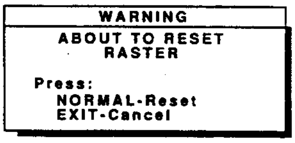
The Volume control allows you to adjust the volume.


Volume Control
Volume Control
Mute : Off
–
+

POSITION/CONTROL +/-	: moves the bar in the + or - direction to increase or decrease the volume.
EXIT	: exits to the main menu.

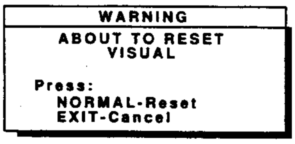
NORMAL

Pressing NORMAL allows you to reset the settings back to the factory settings.


WARNING
ABOUT TO RESET
RASTER
Press:
NORMAL-Reset
EXIT-Cancel

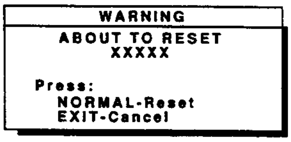
Screen when NORMAL is pressed with no OSM display.

The above warning statement will appear to confirm that you do want to reset all raster settings.


WARNING
ABOUT TO RESET
VISUAL
Press:
NORMAL-Reset
EXIT-Cancel

Screen when NORMAL is pressed with no OSM display.

The above warning statement will appear to confirm that you do want to reset all visual settings.


WARNING
ABOUT TO RESET
XXXXX
Press:
NORMAL-Reset
EXIT-Cancel

Screen when NORMAL is pressed during adjustment.

The above warning statement will appear to confirm that you do want to reset individual settings. XXXXX refers to a specific adjustment item you with to reset.

NOTE:

- **In addition to OSM controls, adjustments can be directly accessed with the remote control keys. When adjusting with the remote control keys, the on-screen display for the related adjustment appears instead of the OSM menu.**
- **When Pin No. 5 of the DIP SW 1 is set at the OFF position, OSM controls are not available while the remote control direct access is possible.**

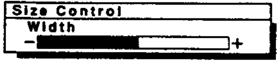
Direct Control Screen

To switch to another control screen, press any one of the other keys.

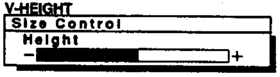
*To end the OSM display, press EXIT.

*If no key operation is made within three seconds, the OSM display will disappear.

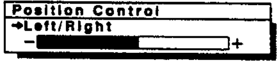
H-WIDTH


Size Control
Width
–
+

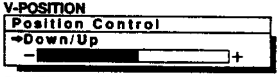
V-HEIGHT


Size Control
Height
–
+

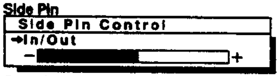
H-POSITION


Position Control
→Left/Right
–
+

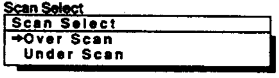
V-POSITION


Position Control
→Down/Up
–
+

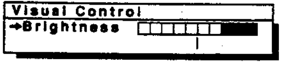
Side Pin


Side Pin Control
→In/Out
–
+

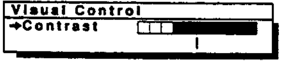
Scan Select


Scan Select
→Over Scan
Under Scan

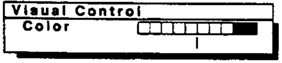
Brightness


Visual Control
→Brightness

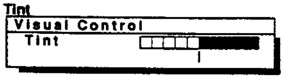
Contrast


Visual Control
→Contrast

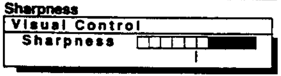
Color


Visual Control
Color

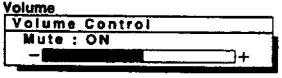
Tint


Visual Control
Tint

Sharpness

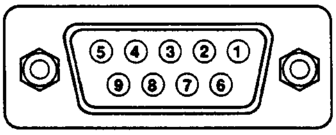

Visual Control
Sharpness

Volume


Volume Control
Mute : ON
–
+

External Control Function

External Control Port Pin Assignments



<table>
<tr><th>Pin No.</th><th>Signal to be connected</th><th>OPEN</th><th>GND</th></tr>
<tr><td>1</td><td>POWER CONTROL</td><td>OFF</td><td>ON</td></tr>
<tr><td>2, 3</td><td>INPUT SELECT
<table>
<tr><td>NO.2</td><td>NO.3</td><td>INPUT</td></tr>
<tr><td>OPEN</td><td>OPEN</td><td>VIDEO 1</td></tr>
<tr><td>GND</td><td>OPEN</td><td>VIDEO 2</td></tr>
<tr><td>OPEN</td><td>GND</td><td>RGB 1</td></tr>
<tr><td>GND</td><td>GND</td><td>RGB 2</td></tr>
</table></td><td></td><td></td></tr>
<tr><td>4</td><td>AUDIO MUTE</td><td>OFF</td><td>ON</td></tr>
<tr><td>5</td><td>PICTURE MUTE</td><td>OFF</td><td>ON</td></tr>
<tr><td>6</td><td>No connection</td><td>- -</td><td>- -</td></tr>
<tr><td>7</td><td>DEGAUSS SWITCH</td><td>OFF</td><td>ON</td></tr>
<tr><td>8</td><td>No connection</td><td>- -</td><td>- -</td></tr>
<tr><td>9</td><td>GND</td><td></td><td></td></tr>
</table>

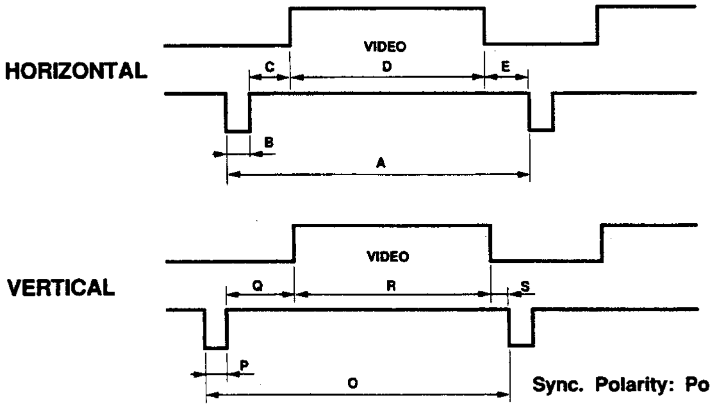
NOTE: "GND" means to connect with pin 9.

NOTE: If EXT. Control is set to ON, EXT. Control will be effective only for the above functions.

Timing Charts

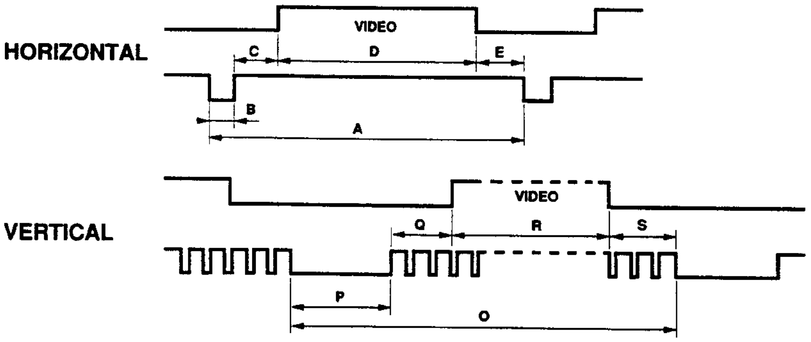
Input Signal Reference Chart

Separate Sync



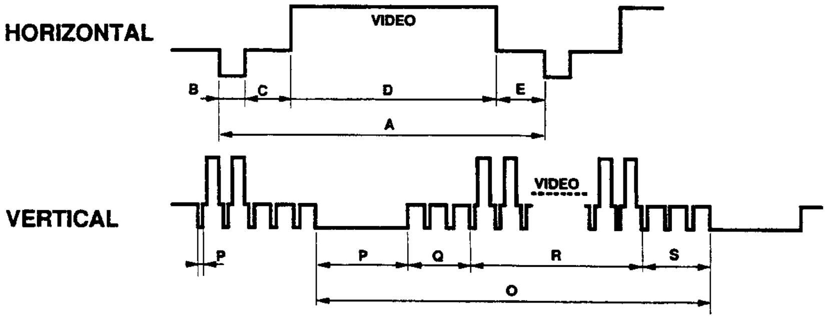
Sync. Polarity: Positive / Negative

Composite Sync


HORIZONTAL
VIDEO
C
D
E
B
A
VERTICAL
VIDEO
Q
R
S
P
O

Sync. Polarity: Positive / Negative

Composite Sync & Video (Sync on Green)


HORIZONTAL
VIDEO
B
C
D
E
A
VERTICAL
VIDEO
P
P
Q
R
S
O

Sync Polarity: Negative

Recommended Sync Signal Timing

Horizontal Duty should be 3 to 30%.
Horizontal sync width should exceed 1.0 μsec.
Horizontal back porch should exceed 1.2 μsec.
Horizontal blanking should exceed 4.2 μsec.
Vertical Duty should be 0.2 to 10%.
Vertical sync width should exceed 40 μsec or 2 horizontal lines.
Vertical sync width plus back porch should exceed 0.40 msec.

Typical Input Signal Timing

	VGA Compatible			XGA-2 Compatible			Mac II, Quadra, or LC Compatible
Resolution	640×350	720×400	640×480	720×350	720×400	640×480	640×480
Horizontal Frequency	31.469KHz	31.469KHz	31.469KHz	39.444KHz	39.444KHz	39.375KHz	35.000KHz
(A) Horizontal Period	31.778μsec	31.778μsec	31.778μsec	25.352μsec	25.352μsec	25.397μsec	28.570μsec
(B) Horizontal Pulse Width	3.813μsec	3.813μsec	3.813μsec	3.042μsec	3.042μsec	3.048μsec	2.120μsec
(C) Horizontal Back Porch	1.589μsec	1.589μsec	1.589μsec	1.522μsec	1.522μsec	1.524μsec	3.170μsec
(D) Horizontal Active Area	26.058μsec	26.058μsec	26.058μsec	20.282μsec	20.282μsec	20.317μsec	22.810μsec
(E) Hrizontal Front Porch	0.318μsec	0.318μsec	0.318μsec	0.508μsec	0.508μsec	0.508μsec	0.180μsec

	VESA 640×480 at 72Hz	VESA 800×600 at 56Hz	VESA 800×600 at 60Hz	VESA 800×600 at 72Hz	MAC II & Quadra	8514/A & XGA Interlaced Compartible	VESA 1024×768 at 60Hz
Resolution	640×480	800×600	800×600	800×600	832×624	1024×768	1024×768
Horizontal Frequency	37.860KHz	35.156KHz	37.879KHz	48.077KHz	49.725KHz	35.587KHz	48.363KHz
(A) Horizontal Period	26.413μsec	28.444μsec	26.400μsec	20.800μsec	20.111μsec	28.100μsec	20.677μsec
(B) Horizontal Pulse Width	1.270μsec	2.000μsec	3.200μsec	2.400μsec	1.117μsec	3.910μsec	2.092μsec
(C) Horizontal Back Porch	4.063μsec	3.556μsec	2.200μsec	1.280μsec	3.910μsec	1.247μsec	2.462μsec
(D) Horizontal Active Area	20.317μsec	22.222μsec	20.000μsec	16.000μsec	14.524μsec	22.760μsec	15.754μsec
(E) Horizontal Front Porch	0.762μsec	0.667μsec	1.000μsec	1.120μsec	0.559μsec	0.178μsec	0.369μsec

*VGA, XGA, XGA-2, and 8514/A are the trademarks of International Business Machines Corporation.
*Macintosh II, Quadra, and LC are the trademarks of Apple Computer Inc.
*VESA is the trademark of a non-profit organization, Video Electronics Standards Association.

	VGA Compatible			XGA-2 Compatible			Mac Ⅱ, Quadra, or LC Compatible
Resolution	640×350	720×400	640×480	720×350	720×400	640×480	640×480
Vertical Frequency	70.080Hz	70.080Hz	59.940Hz	87.850Hz	87.850Hz	75.000Hz	66.667Hz
(O) Vertical Period	14.268msec	14.268msec	16.683msec	11.383msec	11.383msec	13.333msec	15.000msec
(P) Vertical Pulse Width	0.064msec	0.064msec	0.064msec	0.051msec	0.051msec	0.051msec	0.090msec
(Q) Vertical Back Porch	1.716msec	0.890msec	0.793msec	1.496msec	0.862msec	0.813msec	1.110msec
(R) Vertical Active Area	11.504msec	13.156msec	15.762msec	8.873msec	10.141msec	12.190msec	13.710msec
(S) Vertical Front Porch	0.985msec	0.159msec	0.064msec	0.963msec	0.329msec	0.279msec	0.090msec

	VESA 640×480 at 72Hz	VESA 800×600 at 56Hz	VESA 800×600 at 60Hz	VESA 800×600 at 72Hz	MAC Ⅱ & Quadra	8514/A & XGA Interlaced Compartible	VESA 1024×768 at 60Hz
Resolution	640×480	800×600	800×600	800×600	832×624	1024×768	1024×768
Vertical Frequency	72.809Hz	56.250Hz	60.317Hz	72.187Hz	74.550Hz	86.960Hz	60.000Hz
(O) Vertical Period	13.735msec	17.778msec	16.579msec	13.853msec	13.414msec	11.499msec	16.667msec
(P) Vertical Pulse Width	0.079msec	0.057msec	0.106msec	0.125msec	0.060msec	0.112msec	0.124msec
(Q) Vertical Back Porch	0.740msec	0.626msec	0.607msec	0.478msec	0.784msec	0.577/0.563msec	0.600msec
(R) Vertical Active Area	12.678msec	17.067msec	15.840msec	12.480msec	12.549msec	10.824msec	15.880msec
(S) Vertical Front Porch	0.238msec	0.028msec	0.026msec	0.770msec	0.020msec	0.000/0.014msec	0.062msec

Signal Identification For Raster Preset

			H-SYNC POLA	V-SYNC POLA	COMP SYNC	SYNC ON-G	FH (KHz)	FV (KHz)	FACTORY PRESET	USER PRESET	DISPLAY MODE ON OSM	KIND OF SIGNAL
VIDEO1/2 INPUT	NTSC/M-NTSC 15.734KHz	V-1	×	×	×	×	×	×	YES 1	YES 1	NTSC/ M(4.43)NTSC	NTSC, M-NTSC
	PAL 15.625KHz FACTORY=2 USER=2	V-2	×	×	×	×	×	×	YES 2	YES 2	PAL	PAL
RGB1/2 INPUT	MODE 1 24- 29KHz	1-1	×	×	×	×	×	×	7-1	— — — — — —	— — — — — —	
	MODE 2	2-1	L	L	L	L	31.5	60	YES 3	—	640×480	VESA Industry Standard
	29-	2-2	L	H	L	L	×	×	YES 4	—	640×400	640×400/720×400
	34KHz	2-3	H	L	L	L	×	×	7-1	—	—	
	FACTORY=3	2-4	H	H	L	L	×	×	7-1	—	—	
		2-5	×	×	H	L	×	×	7-1	—	—	
		2-6	×	×	×	H	×	×	7-1	—	—	
		2-7	×	×	×	×	33.7	60	YES 5	—	HDTV	HDTV(33.75KHz)
	MODE 3	3-1	L	L	L	L	37.9	72	YES 6	—	640×480	VESA640×480(72Hz)
	34-	3-2	L	H	L	L	×	×	7-1	—	—	
	43KHz	3-3	H	L	L	L	×	×	7-1	—	—	
		3-4	H	H	L	L	35.2	56	YES 7	—	800×600	VESA800×600(56Hz)
	FACTORY=5	3-5	H	H	L	L	37.9	60	YES 8	—	800×600	VESA800×600(60Hz)
		3-6	×	×	H	L	38.4	72	YES 9	—	640×480	REUTER 640×480(72Hz)
		3-7	×	×	×	×	35.0	66	YES10	—	640×480	MAC-13"640×480(67Hz)
	MODE 4	4-1	L	L	L	L	48.4	43	YES11	—	1024×768	VESA Industry Standard
	43-	4-2	L	L	L	L	46.9	75	YES12	—	800×600	VESA 800×600(75Hz)
		4-3	L	L	L	L	48.7	60	YES13	—	1024×768	VESA1024×768(60Hz)
	53KHz	4-4	L	H	L	L	×	×	7-1	—	—	
		4-5	H	L	L	L	×	×	7-1	—	—	
	FACTORY=5	4-6	H	H	L	L	48.1	72	YES14	—	800×600	VESA800×600(72Hz)
		4-7	×	×	H	L	×	×	7-1	—	—	
		4-8	×	×	×	H	48.1	72	YES15	—	800×600	REUTER 800×600
		4-9	×	×	×	H	49.7	75	YES16	—	832×624	MAC-16"832×624
	MODE 5	5-1	L	L	L	L	×	×	7-1	—	—	
	53-	5-2	L	L	L	L	56.5	70	YES17	—	1024×768	VESA1024×768(70Hz)
	66KHz	5-3	L	H	L	L	×	×	7-1	—	—	
		5-4	H	L	L	L	×	×	7-1	—	—	
		5-5	H	H	L	L	60.0	75	YES18	—	1024×768	VESA1024×768(75Hz)
	FACTORY=3	5-6	H	H	L	L	64.3	60	YES19	—	1280×1024	VESA1280×1024(60Hz)
		5-7	×	×	H	L	×	×	7-1	—	—	
		5-8	×	×	×	H	×	×	7-1	—	—	
	MODE 6	6-1	L	L	L	L	×	×	7-1	—	—	
	66-	6-2	L	H	L	L	×	×	7-1	—	—	
	80KHz	6-3	H	L	L	L	×	×	7-1	—	—	
		6-4	H	H	L	L	80.0	75	YES20	—	1280×1024	VESA1280×1024(75Hz)
	FACTORY=2	6-5	×	×	H	L	×	×	7-1	—	—	
		6-6	×	×	×	H	68.6	75	YES21	—	1152×870	MAC-21"1152×870
	MODE 7	7-1	×	×	×	×	×	×	—	—	—	
	USER	8-1	×	×	×	×	×	×	—	YES 3		When the signal has the same horizontal/vertical frequency, and polarity type as the above factory preset signal, the appropriate mode(resolution) listed above is used as a display mode on OSM.
	MEMORY	8-2	×	×	×	×	×	×	—	YES 4		
	24-	8-3	×	×	×	×	×	×	—	YES 5		
	78KHz	8-4	×	×	×	×	×	×	—	YES 6		
	USER=8	8-5	×	×	×	×	×	×	—	YES 7		
		8-6	×	×	×	×	×	×	—	YES 8		
		8-7	×	×	×	×	×	×	—	YES 9		
		8-8	×	×	×	×	×	×	—	YES10		

NOTE:1) L= NEG SYNC
H=POS SYNC
X= NEG OR POS SYNC OR NO SYNC
2) MODE 5 and 6 do not apply to XM37.

FACTORY : 21 PRESET
USER : 10 PRESET
Total 31 memories

3) When the user preset data is changed in the horizontal and the vertical frequency, the sync. polarity, separate, composite or sync on green, the data is stored in another memoru area.
The memory area contains up to the chronological ten preset data stored in a wraparound fashion within the memory area. The DISPLAY MODE on OSM shows where the preset data is memorized.

Troubleshooting

Before arranging for service by the NEC Service Center, check the following to be sure repairs are needed.

Problem	Possible Cause	Correction
No Picture or Sound	Power cord unplugged. Power outlet inactive. Power of external equipment is not ON. External equipment has been incorrectly connected. Incorrect input selection.	Plug in power cord. Be sure wall switch is on and outlet has power. Switch to ON or connect to an active AC outlet. Correct all connections. Press correct RGB1, RGB 2, VIDEO 1 or VIDEO 2 button.
Sound OK; poor picture with VIDEO signal input.	Improper control setting. Local interference. Cable interconnections. Input impedance is not correct level.	Adjust picture controls as needed. Try another location for the monitor. Be sure all connections are secure. Check 75 ohm high impedance select switch.
Sound OK; poor picture with RGB signal input.	Improper control setting. Incorrect 15 PIN connector pin connections.	Adjust picture controls as needed. Check pin assignments and connections.
Picture OK; poor or no sound.	Cable interconnections. Volume is not adjusted. Poor audio connections from external source. Improper control settings. MUTE key is ON.	Be sure all connections are secure. Adjust volume. Correct audio connections. Adjust volume controls. Press again to restore sound.
Poor sound from external speakers or setereo system speakers	Cable interconnections. Improper volume setting.	Secure all cable connections. Check volume controls of all components.
Remote control does not work.	Weak batteries. Obstacle between Remote Control and Sensor Window. (Wireless) You are not within the effective operating range. (Wireless) Incorrect setting of DIP SW 1. (Wireless) When in the EXT. CONTROL mode, the remote control unit will not operate the monitor. The remote cable is plugged into the REMOTE IN terminal. (Wireless)	Install new batteries. Point remote control directly at Sensor Window. Use the remote control unit within 30° left and right of center (at a distance of within 22ft). Set Pin no. 8 to ON. Set Pin no. 7 of DIP SW 1 to OFF. Unplug the remote cable from the monitor.
STANDBY/POWER Indicator is blinking	Horizontal and/or vertical sync signal is not present when the Intelligent Power Manager control is on.	Check the input signal.

In the following case, power off the monitor immediately and contact your dealer or authorized NEC Service Center.
The monitor turns off in 5 seconds after powering on and then the STANDBY/POWER indicator blinks at the same time. It indicates that the power supply circuit or, one or more fans have been damaged.

Specifications

Picture tube	35 inch Visual size; 37 inch CRT size (Diagonal), Type M89LAK113K 108 degree deflection Stripe trio pitch Ph 0.85mm at center, Ph 1.05mm at corner/Pr 0.87mm Invar mask, Medium-short persistence phosphor Anti-static electricity coating Optical filter coating Dynamic focus
RGB Input Terminals	RGB 1 : D-SUB 15pin RGB 2: (R, G, B, H/CS and V) : Video : Analog 0.7Vp-p/75 Ohms (Positive) : Sync. : Separate Sync TTL level, 0.7 - 4.0Vp-p/75 Ohms..........RGB 2 only Horizontal Sync (Positive/Negative) Vertical Sync (Positive/Negative) : Composite Sync TTL Level (Positive/Negative) : Composite Sync On Green Video 0.3Vp-p (Negative)
RGB Output Terminals **THROUGH OUT**	RGB 1 : D-SUB 15pin RGB 2 : BNC (R, G, B, H/CS and V)
Video Input Terminals **VIDEO 1/2** **S-VIDEO (Video 1/2)**	1.0Vp-p, 75 Ohms unbalanced (BNC-Jack), Composite video signal, Sync-negative. Y : 1.0Vp-p, 75 Ohms unbalanced, Sync-negative. C : 0.28Vp-p, 75 Ohms unbalanced, Color burst level.

Video Output Terminals **THROUGH OUT (Video 1, 2)** **THROUGH OUT (S-VIDEO 1, 2)**	1.0Vp-p, 75 Ohms unbalanced (BNC Jack), Composite video signal, Sync-negative. Y : 1.0Vp-p, 75 Ohms unbalanced, Sync-negative. C : 0.28Vp-p, 75 Ohms unbalanced, Color burst level.
Audio Input Terminals **VIDEO 1, 2 / RGB**	Left (Mono) : 0.5 Vrms, high impedance (Pin-Jack) Right : 0.5Vrms, high impedance (Pin-Jack)
Audio Output Terminals **THROUGH OUT**	Left : 0.5 ± 0.1 Vrms, less than 22 K Ohms (Pin-Jack) Right : 0.5 ± 0.1 Vrms, less than 22 K Ohms (Pin-Jack)
External Control **(IN/THROUGH OUT)**	D-SUB 9pin (IN/THROUGH OUT)
SOUND Output **Internal** **External**	2.5W+2.5W (THD 10%) at 16 Ohm 5W+5W (THD10%) at 8 Ohm
Speaker	Oval type 9 X 5.5 cm 16 Ohm, 2pcs.
Display Colors	Analog Input: Unlimited colors
Synchronization Range	Horizontal: XP$_{37}$; 24 KHz to 78 KHz XM$_{37}$; 24 KHz to 50 KHz (Automatically) Vertical:40 Hz to 120 Hz (Automatically)

Maximum Resolution	RGB H 832 dot × V 624 line VIDEO Horizontal: 500 lines
Video Bandwidth	RGB: 50 MHz at-3dB VIDEO: 8 MHz at-3dB
Display Area	RGB : 95% Scan (Typically) VIDEO: 7% Overscan
Retrace Time	Horizontal: 2.5 µsec (at over 50 KHz) (XP_{37}), 3.5µsec (XM_{37}) Vertical: 0.4 msec
Current Rating	XM-3750/XP-3778 : AC 120V, 60Hz / XM-3750G/XP3778G : AC 220-240V, 50/60Hz
Power Consumption	XM-3750/XP-3778 : 4.5A (maximum) / XM-3750G/XP-3778G : 2.5A (maximum)
Dimensions	870(W) x 743(H) x 590(D) mm / $34^1/_4$(W)X$29^1/_4$(H)X$23^1/_4$(D) inches
Weight	109kg / 240.3lbs
Environmental Considerations	Operating Temperature : 0℃ to 40℃ Humidity : 0 to 90% Altitude : 0 to 10,000 feet Storage Temperature : -10℃ to 50℃ Humidity : 0 to 95% Altitude : 0 to 45,000 feet

Regulations :	UL Approved (UL 1950) CSA certified Meets FCC class A requirements Meets DHHS requirements

All specifications are subject to change without notice.

PROFESSIONAL GRAPHICS PRODUCTS

Limited Warranty

MULTIMEDIA MONITORS

NEC Technologies, Inc.(hereafter NECTECH)warrants this product to be free from defects in material and workmanship under the following terms.

HOW LONG IS THE WARRANTY

Parts and labor are warranted for (1) One Year and CRT's for (1) One year from the date of the first customer purchase.

WHO IS PROTECTED

This warranty may be enforced only by the first purchaser.

WHAT IS COVERED AND WHAT IS NOT COVERED

Except as specified below, this warranty covers all defects in material or workmanship in this product. The following are not covered by the warranty:

1. Any product which is not distributed in the U.S.A. by NECTECH or which is not purchased in the U.S.A. from an authorized NECTECH dealer. Authorized NECTECH dealers can be identified by an NEC window decal. Any dealer which does not display this decal may be an unauthorized dealer. If you are uncertain as to whether a dealer is authorized, please contact NECTECH .
2. Any product on which the serial number has been defaced, modified or removed.
3. Damage, deterioration or malfunction resulting from:
   a. Accident, misuse, abuse, neglect, fire, water, lightning or other acts of nature, unauthorized product modification, or failure to follow instructions supplied with the product.
   b. Repair or attempted repair by anyone not authorized by NECTECH.
   c. Any shipment of the product (claims must be presented to the carrier).
   d. Removal or installation of the product.
   e. Any other cause which does not relate to a product defect.
   f. Burns or residual images upon the phosphor of the tubes.
4. Cartons, carrying cases, batteries, external cabinets, magnetic tapes, or any accessories used in connection with the product.

WHAT WE WILL PAY FOR AND WHAT WE WILL NOT PAY FOR

We will pay labor and material expenses for covered items, but we will not pay for the following:

1. Removal or installation charges.
2. Costs of initial technical adjustments(set-up), including adjustment of user controls. These costs are the responsibility of the NECTECH dealer from whom the product was purchased.
3. Payment of shipping charges.

HOW YOU CAN GET WARRANTY SERVICE

1. To obtain service on your product, consult the dealer from whom you purchased the product, or ship it prepaid to any authorized NECTECH service center.
2. Whenever warranty service is required, the original dated invoice (or a copy) must be presented as proof of warranty coverage, and should be included in any shipment of the product. Please also include in any mailing, your name, address and a description of the problem(s).
3. For the name of the nearest NECTECH authorized service center, contact your dealer or NECTECH.

LIMITATION OF IMPLIED WARRANTIES

All implied warranties, including warranties of merchantability and fitness for a particular purpose, are limited in duration to the length of this warranty.

EXCLUSION OF DAMAGES

NECTECH's liability for any defective product is limited to the repair or replacement of the product at our option. NECTECH shall not be liable for:

1. Damage to other property caused by any defects in this product, damages based upon inconvenience, loss of use of the product, loss of time, commercial loss; or
2. Any other damages whether incidental, consequential or otherwise. Some states do not allow limitation on how long an implied warranty lasts and/or do not allow the exclusion or limitation of incidental or consequential damages, so the above limitations and exclusions may not apply to you.

HOW STATE LAW RELATES TO THE WARRANTY

This warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

FOR ALL WARRANTY INFORMATION, TELEPHONE:(800)-388-8888

or write to:

NEC Technologies, Inc., 1255 Michael Drive,
Wood Dale, IL 60191
Attention: Professional Graphics Group

User' s Manual Supplement Sheet

The following items were not able to be included in the user' s manual:

•Memory Function

Each user adjustment made to an input will be automatically stored into memory unless:
-There are changes made in the horizontal and/or vertical frequency, sync polarity, separate, composite, or sync on green during the display or operation of the OSM System.
-The monitor is disconnected from the AC source during the display or operation of the OSM System

•RGB Loop-out

Vertical lines may appear doubled when an RGB signal with any of the following characteristics is looped out:
- Horizontal frequency of 60kHz or more.
- RGB dot clock frequency of 100MHz or more.

To prevent this occurrence we recommend the use of a high resolution/ high bandpass cable of 10 feet (3 m) or less for loop-through connection. (THROUGH OUT Connections on page page 3-14)

•Vertical frequency identification in OSM Display System

Vertical frequencies identified by the OSM System' s Display Mode function may exhibit variances from the actual vertical frequency of the connected input source. Vertical frequencies between 60-70Hz may vary by +/- 3Hz; vertical frequencies from 70Hz to 100Hz may vary by +/- 5Hz. In these situations, it is recommended that the vertical frequency identified by the OSM System Display Mode function be regarded as an approximate reference within the tolerances stated above. (Display Mode on page page 3-21)

•Visual Controls in OSM

The picture controls such as Brightness, Contrast, Color, Tint, and Sharpness have their own scroll bars in the diagram of the user' s manual. However, the actual Visual Controls have only one bar similar to the one for Position/Size Controls, in the bottom of the screen. The bar is common to the picture controls stated above. (Visual Controls on page page 3-21)

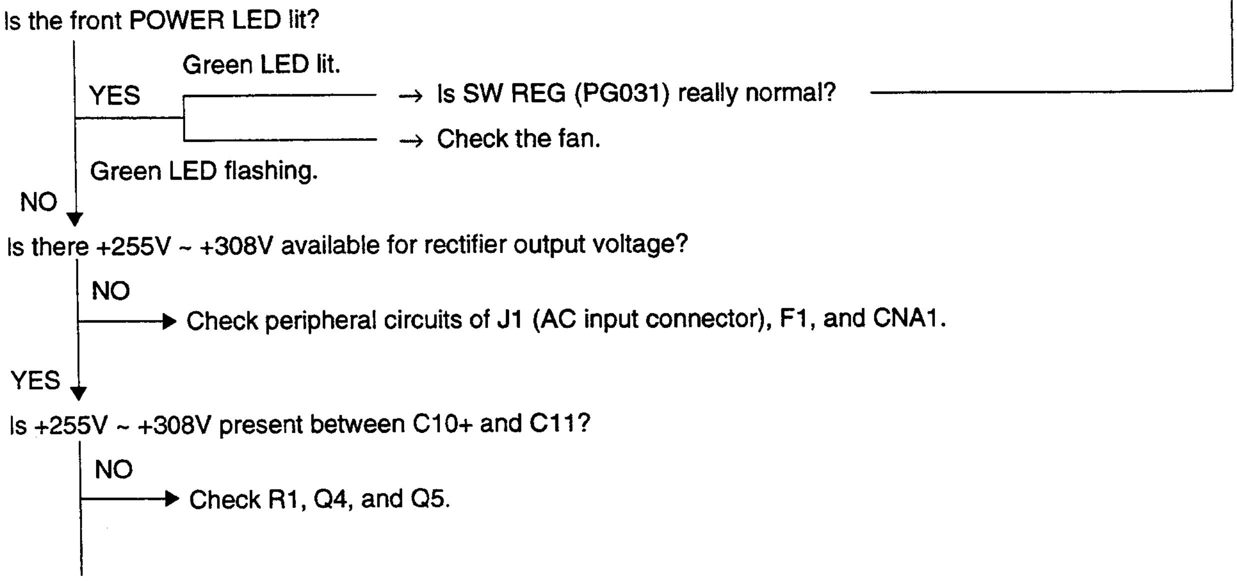
TROUBLESHOOTING

1. Fault in Power Supply

Are output voltages of SW REG (PG031) as specified below?
(Measurements should be done in the state of video signal input or no signal input.)

Connector name	Pin No.	Voltage	Parts to be checked
CNA4	1	+15V	IC1
	3	+5V	IC6
	4	GND	
CNA5	1	+5V	IC5
	2	GND	
	5	+15V	IC3
	10	+165V	D38, 39, Q4, 5, R1
CNA6	1	+6.3V	IC4
	2	GND	
CNA7	1	+190V	F3, D36, Q4, 5, R1
	3	GND	
CNA8	3	+28V	IC8, D34, Q4, 5, R1
	6	GND	
CNA9	1	+24V	F4, D47, Q4, 5, R1
	5	GND	
CNA13	1	24V	F2
	2	GND	
	3	15V	IC2

Note: VR and adjusting resistors
VR1: Voltage adjusted to +165V ± 1V (+190V, +24V to be simultaneously changed).
Silicone applied and sealed after setting at the factory.
R56: Adjusted to +6.3V (heater voltage) for IC4 dispersion adjustments.
R90: Operating voltage setting for overvoltage protection circuit.
+165V → Operation at 187V or more.
+15.8V (input voltage at Pin ⑤ of IC1,2,3) → Operation at +19V or more.
Switching frequency → Fixed to 55kHz (2 systems completely synchronized); duty variable type.



Is the front POWER LED lit?

YES — Green LED lit. → Is SW REG (PG031) really normal?

Green LED flashing. → Check the fan.

NO

Is there +255V ~ +308V available for rectifier output voltage?

NO → Check peripheral circuits of J1 (AC input connector), F1, and CNA1.

YES

Is +255V ~ +308V present between C10+ and C11?

NO → Check R1, Q4, and Q5.

YES ↓

Is operation completely restored when AC input voltage is interrupted and then applied again after the lapse of more than 60 seconds?

YES → Check latch up of +165V load by a transient overload (HV sparks, etc.).

NO ↓

Is the overcurrent protection circuit operating due to short-circuiting in +165V load?

YES → Check H.DEF(PG083), HV&FOCUS(PG085).

NO ↓

Check the 2-character side of SW REG(PG031).

Note: Parts that are liable to be damaged mainly due to wrong operation:

F2(3A/125V)	Error in audio output circuit
F3(1A/125V)	Error in video output circuit
F4(3A/125V)	Short-circuiting in +24V output for fan
Q3,Q4,Q5(2SK1464)	Excessive input in AC POWER
R1(15Ω/7W)	Excessive input in AC POWER

2. Main POWER not Available

Is pilot LED (green) flashing?

YES → Is it in EMERGENCY state? (Is fan operation normal?)

YES → Check fan SENSE (PG090).

Note: This fan is provided with a rotation detector circuit. When the fan stops rotation, pulses from the fan (FAN1~5) are suspended and the power supply is turned off.
→ GND at CNA4 Pin ⑨ of SW REG(PG031) → High level (+5V).

NO ↓

Check +24V line.

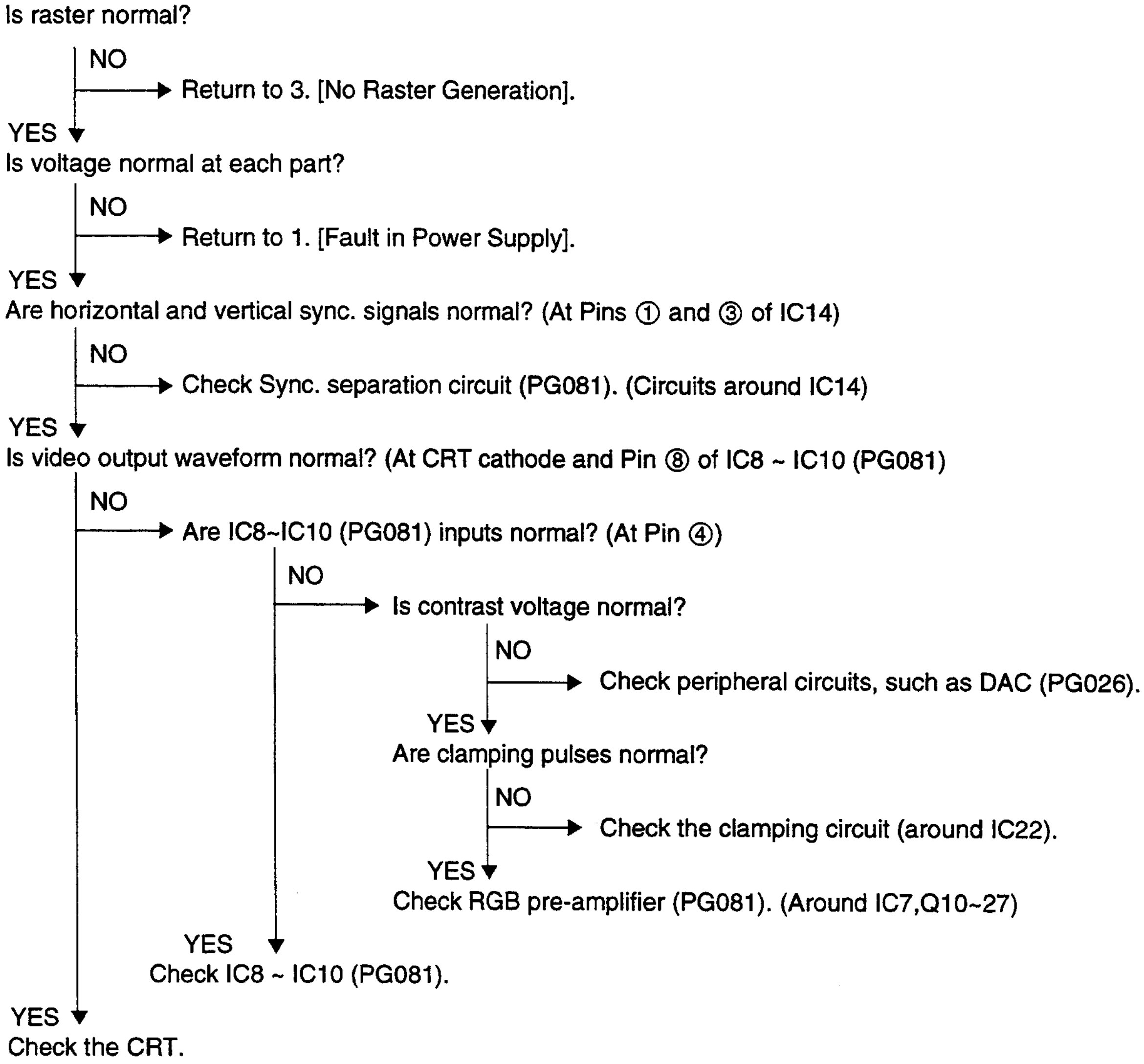
NO ↓

Return to [Fault in Power Supply].

3. No Raster Generation

Is voltage normal at each part?
NO → Return to 1. [Fault in Power Supply].
YES ↓
Is a high voltage generated?
NO → Is H. oscillation available?
NO → Check H.OSC circuit (PG084). (Circuit around IC17)
YES ↓
Is operation of HV chopper REG normal?
NO → Check HV chopper REG circuit (PG085). (Around IC4, Q15)
YES ↓
Check HV output circuit (PG085). (Around Q6, Q7)
YES ↓
Is HV protector in operation?
NO → Is heater heated in red?
NO → Check CN305. (Is the heater melted down?)
YES ↓
Is screen volume adjustment correctly effected?
NO → Readjust the screen volume control.
YES ↓
Is screen voltage normal?
NO → Check FBT.
YES ↓
Check CRT.
YES ↓
Is HV chopper REG in normal operation?
NO → Check HV chopper REG circuit (PG085). (Circuits around IC4, Q15)
YES ↓
Is HV output pulse width changeover circuit in operation?
NO → Check HV output pulse width changeover circuit (PG085). (Circuits around Q12)
YES ↓
Check HV protector circuit (PG085). (Circuits around IC1, IC2)

4. No Picture Generation



Is raster normal?

NO → Return to 3. [No Raster Generation].

YES ↓

Is voltage normal at each part?

NO → Return to 1. [Fault in Power Supply].

YES ↓

Are horizontal and vertical sync. signals normal? (At Pins ① and ③ of IC14)

NO → Check Sync. separation circuit (PG081). (Circuits around IC14)

YES ↓

Is video output waveform normal? (At CRT cathode and Pin ⑧ of IC8 ~ IC10 (PG081)

NO → Are IC8~IC10 (PG081) inputs normal? (At Pin ④)

NO → Is contrast voltage normal?

NO → Check peripheral circuits, such as DAC (PG026).

YES ↓

Are clamping pulses normal?

NO → Check the clamping circuit (around IC22).

YES ↓

Check RGB pre-amplifier (PG081). (Around IC7,Q10~27)

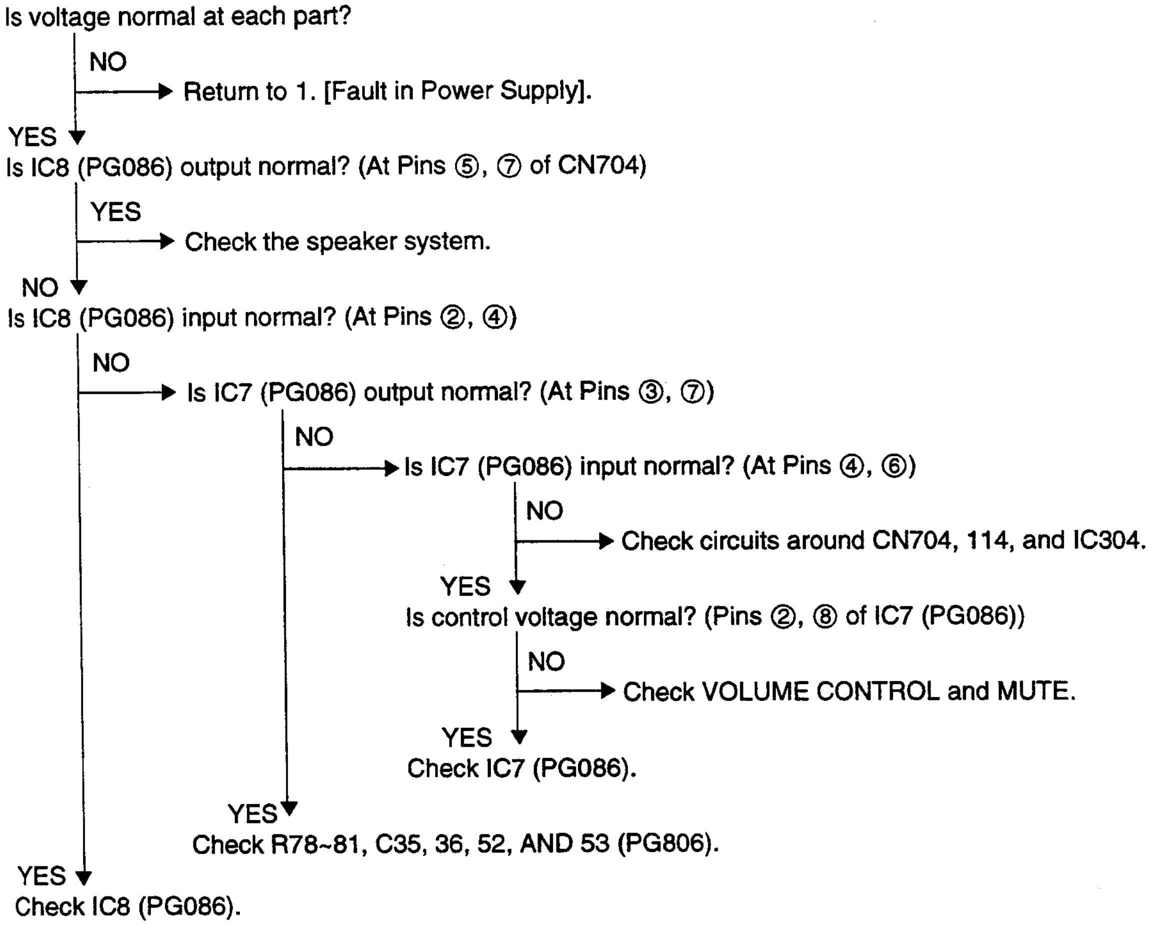
YES ↓

Check IC8 ~ IC10 (PG081).

YES ↓

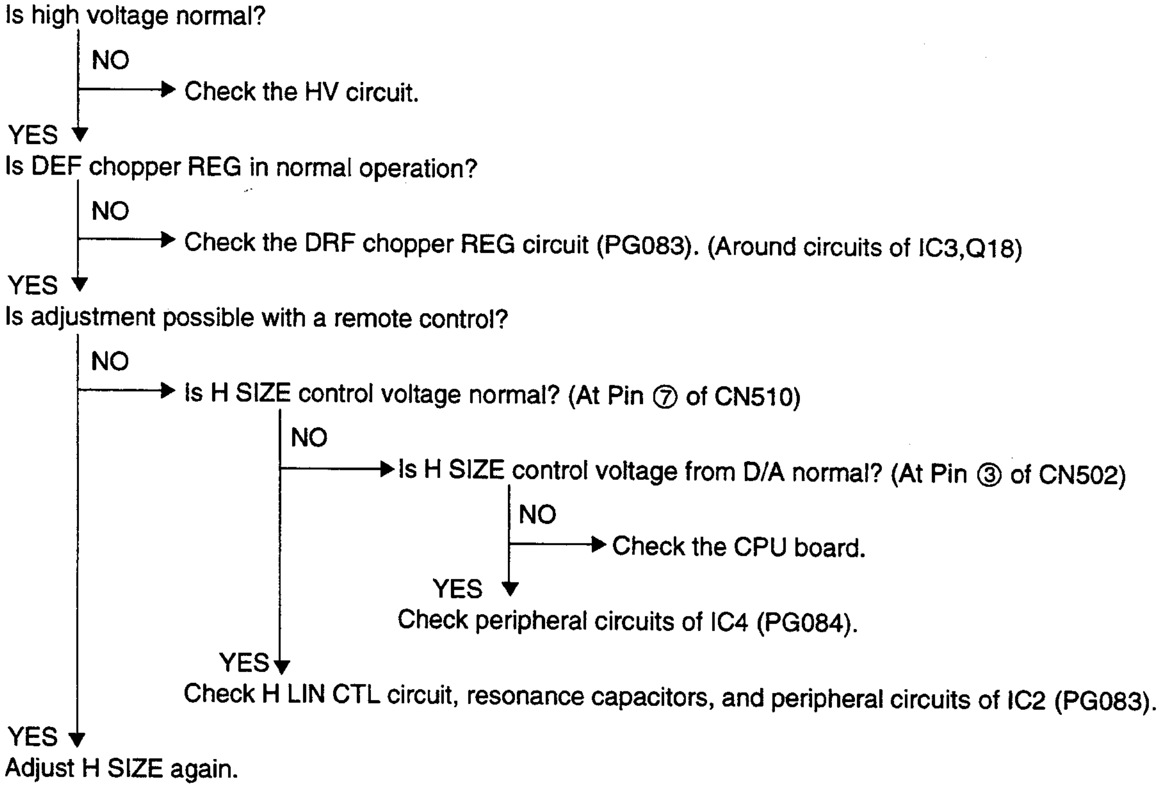
Check the CRT.

5. No Sound Generation

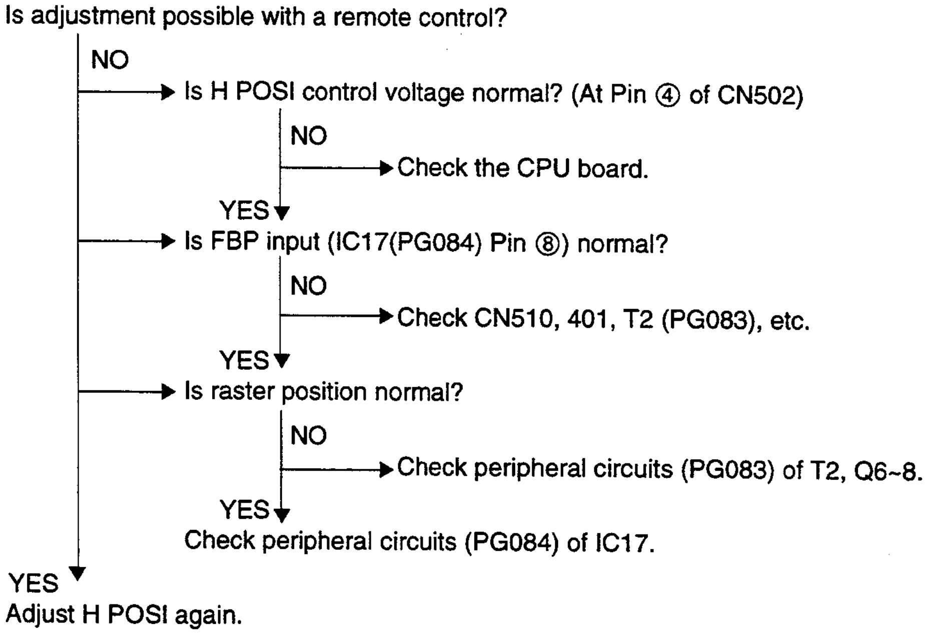

Is voltage normal at each part?
NO
Return to 1. [Fault in Power Supply].
YES
Is IC8 (PG086) output normal? (At Pins ⑤, ⑦ of CN704)
YES
Check the speaker system.
NO
Is IC8 (PG086) input normal? (At Pins ②, ④)
NO
Is IC7 (PG086) output normal? (At Pins ③, ⑦)
NO
Is IC7 (PG086) input normal? (At Pins ④, ⑥)
NO
Check circuits around CN704, 114, and IC304.
YES
Is control voltage normal? (Pins ②, ⑧ of IC7 (PG086))
NO
Check VOLUME CONTROL and MUTE.
YES
Check IC7 (PG086).
YES
Check R78~81, C35, 36, 52, AND 53 (PG806).
YES
Check IC8 (PG086).

6. Raster Defective

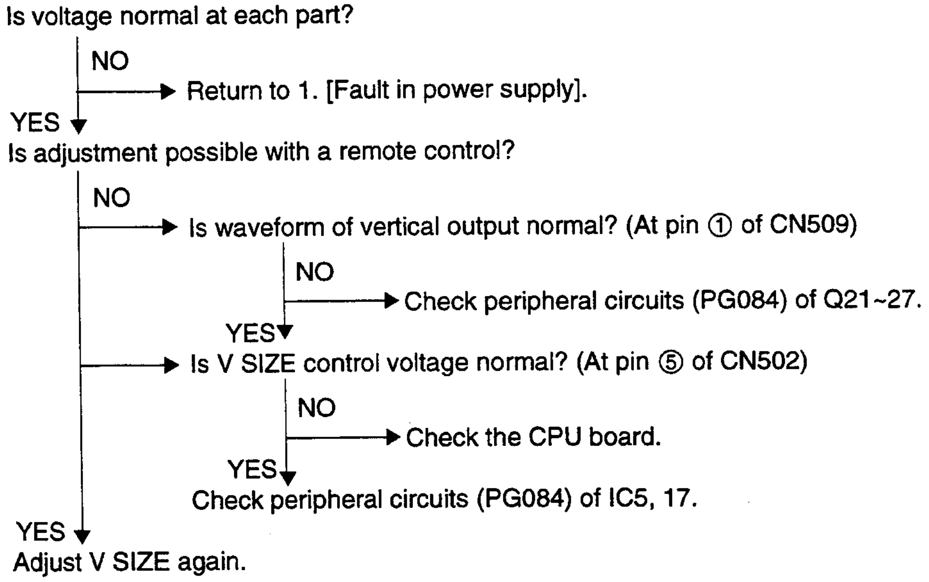
6-1. Horizontal Amplitude Defective


Is high voltage normal?
NO
Check the HV circuit.
YES
Is DEF chopper REG in normal operation?
NO
Check the DRF chopper REG circuit (PG083). (Around circuits of IC3,Q18)
YES
Is adjustment possible with a remote control?
NO
Is H SIZE control voltage normal? (At Pin ⑦ of CN510)
NO
Is H SIZE control voltage from D/A normal? (At Pin ③ of CN502)
NO
Check the CPU board.
YES
Check peripheral circuits of IC4 (PG084).
YES
Check H LIN CTL circuit, resonance capacitors, and peripheral circuits of IC2 (PG083).
YES
Adjust H SIZE again.

6-2.Horizontal Position Defective

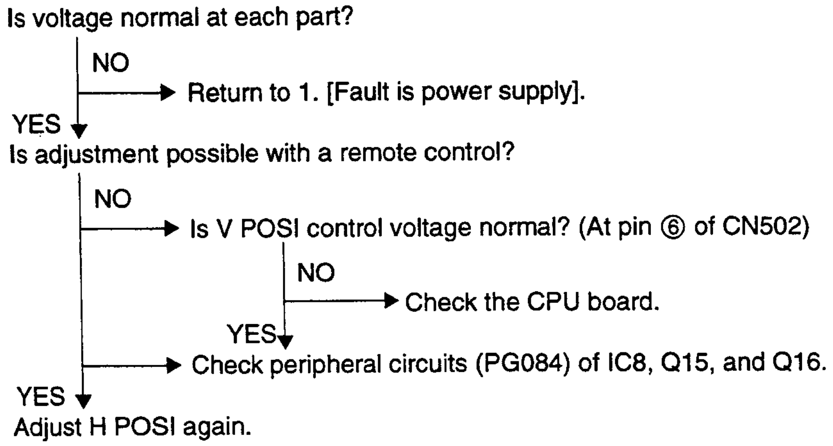

Is adjustment possible with a remote control?
NO
Is H POSI control voltage normal? (At Pin ④ of CN502)
NO
Check the CPU board.
YES
Is FBP input (IC17(PG084) Pin ⑧) normal?
NO
Check CN510, 401, T2 (PG083), etc.
YES
Is raster position normal?
NO
Check peripheral circuits (PG083) of T2, Q6~8.
YES
Check peripheral circuits (PG084) of IC17.
YES
Adjust H POSI again.

6-3. Vertical Amplitude Defective



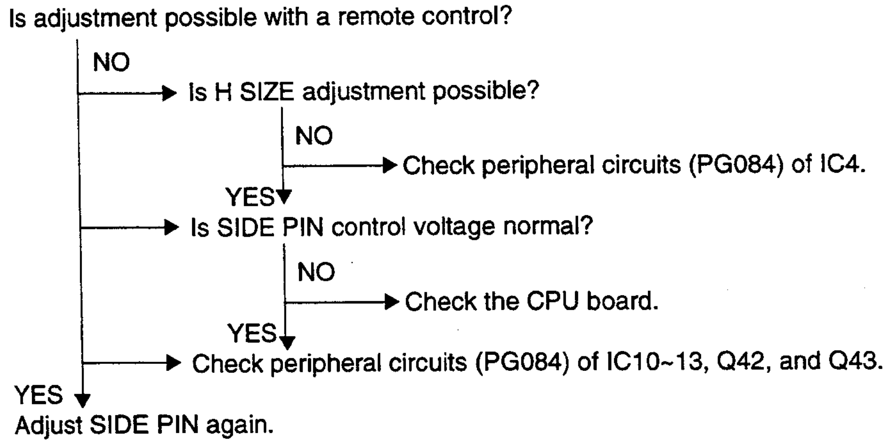
Is voltage normal at each part?
NO → Return to 1. [Fault in power supply].
YES ↓
Is adjustment possible with a remote control?
NO → Is waveform of vertical output normal? (At pin ① of CN509)
NO → Check peripheral circuits (PG084) of Q21~27.
YES ↓
→ Is V SIZE control voltage normal? (At pin ⑤ of CN502)
NO → Check the CPU board.
YES ↓
Check peripheral circuits (PG084) of IC5, 17.
YES ↓
Adjust V SIZE again.

6-4. Horizontal Position Defective



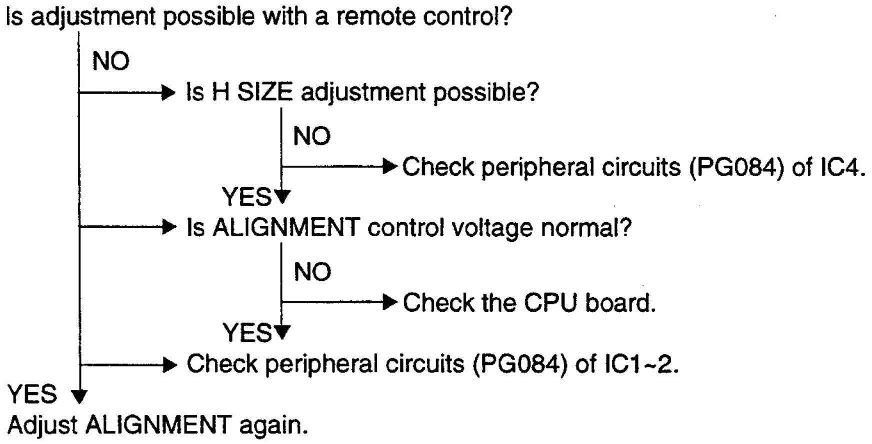
Is voltage normal at each part?
NO → Return to 1. [Fault is power supply].
YES ↓
Is adjustment possible with a remote control?
NO → Is V POSI control voltage normal? (At pin ⑥ of CN502)
NO → Check the CPU board.
YES ↓
→ Check peripheral circuits (PG084) of IC8, Q15, and Q16.
YES ↓
Adjust H POSI again.

6-5. Side Pin Defective

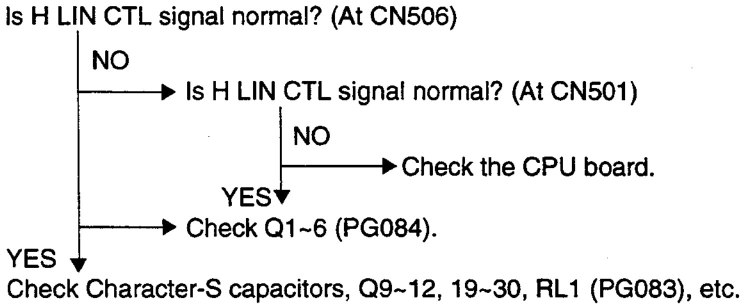


Is adjustment possible with a remote control?
NO → Is H SIZE adjustment possible?
NO → Check peripheral circuits (PG084) of IC4.
YES ↓
→ Is SIDE PIN control voltage normal?
NO → Check the CPU board.
YES ↓
→ Check peripheral circuits (PG084) of IC10~13, Q42, and Q43.
YES ↓
Adjust SIDE PIN again.

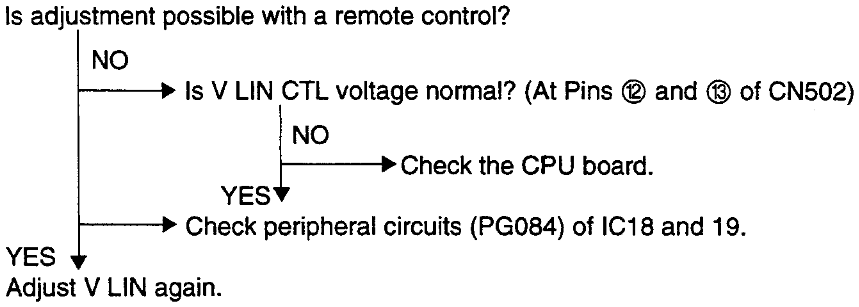
6-6. Trapezoidal Distortion Inadequate


Is adjustment possible with a remote control?
NO
Is H SIZE adjustment possible?
NO
Check peripheral circuits (PG084) of IC4.
YES
Is ALIGNMENT control voltage normal?
NO
Check the CPU board.
YES
Check peripheral circuits (PG084) of IC1~2.
YES
Adjust ALIGNMENT again.

6-7. Horizontal Linearity Defective


Is H LIN CTL signal normal? (At CN506)
NO
Is H LIN CTL signal normal? (At CN501)
NO
Check the CPU board.
YES
Check Q1~6 (PG084).
YES
Check Character-S capacitors, Q9~12, 19~30, RL1 (PG083), etc.

6-8. Vertical Linearity Defective


Is adjustment possible with a remote control?
NO
Is V LIN CTL voltage normal? (At Pins ⑫ and ⑬ of CN502)
NO
Check the CPU board.
YES
Check peripheral circuits (PG084) of IC18 and 19.
YES
Adjust V LIN again.

7. Synchronization Defective

7-1. Horizontal Sync. Defective

Is horizontal sync. input normal? (At Pin 1 of CN503)
NO → Check sync. separation circuit (PG081). (Circuits around IC14)
YES ↓
Is horizontal sync. input normal? (At Pin 4 of IC17 (PG084))
NO → Check peripheral circuits (PG084) of Q28.
YES ↓
Is H FREQ. CTL voltage normal? (At Pin 1 of CN502)
NO → Check the CPU board.
YES ↓
Check peripheral circuits (PG084) of IC17.

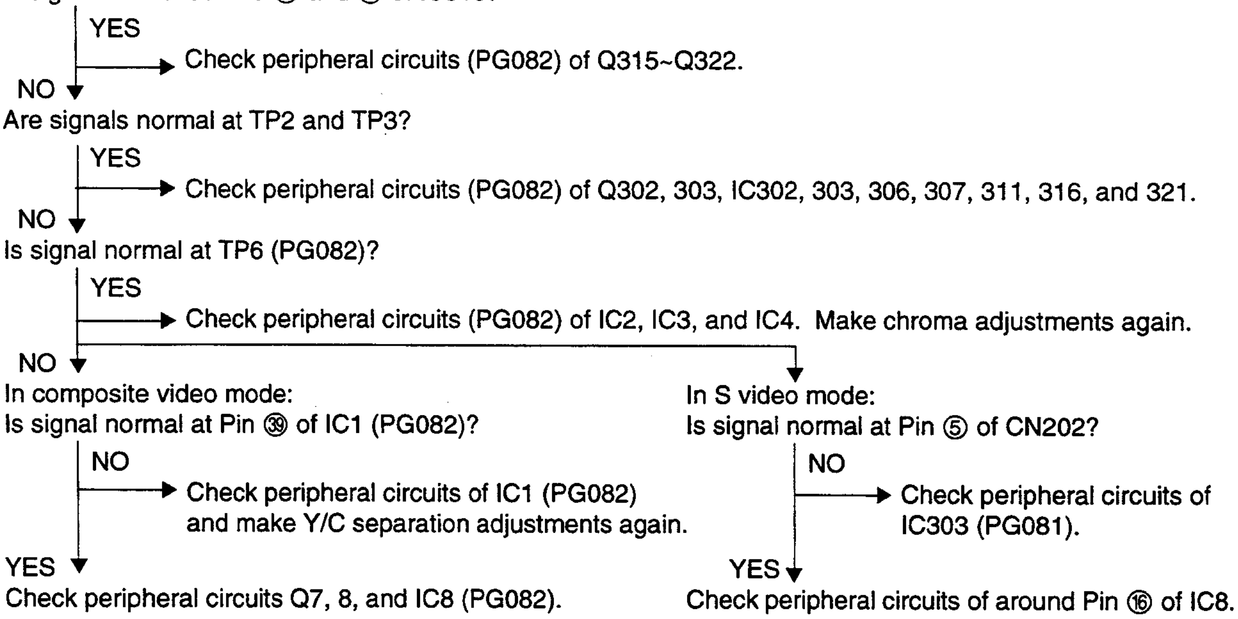
7-2. Vertical Sync. Defective

Is vertical sync. input normal? (At Pin 3 of CN503)
NO → Check sync. separation circuit (PG081). (Circuits around IC14)
YES ↓
Is vertical sync. input normal? (At Pin 14 of IC17 (PG084))
NO → Check peripheral circuits (PG084) of Q29.
YES ↓
Is voltage level normal at Pin 13 of IC17 (PG084)? (Approx. 4Vp-p)
NO → Adjust VR1 (PG084) again.
YES ↓
Check IC17 (PG084).

8. Pictures Defective

8-1. No Color Generation

Is signal normal at Pins ㉘ and ㉚ of IC316?



YES → Check peripheral circuits (PG082) of Q315~Q322.

NO ↓

Are signals normal at TP2 and TP3?

YES → Check peripheral circuits (PG082) of Q302, 303, IC302, 303, 306, 307, 311, 316, and 321.

NO ↓

Is signal normal at TP6 (PG082)?

YES → Check peripheral circuits (PG082) of IC2, IC3, and IC4. Make chroma adjustments again.

NO ↓

In composite video mode:
Is signal normal at Pin ㊴ of IC1 (PG082)?

NO → Check peripheral circuits of IC1 (PG082) and make Y/C separation adjustments again.

YES ↓

Check peripheral circuits Q7, 8, and IC8 (PG082).

In S video mode:
Is signal normal at Pin ⑤ of CN202?

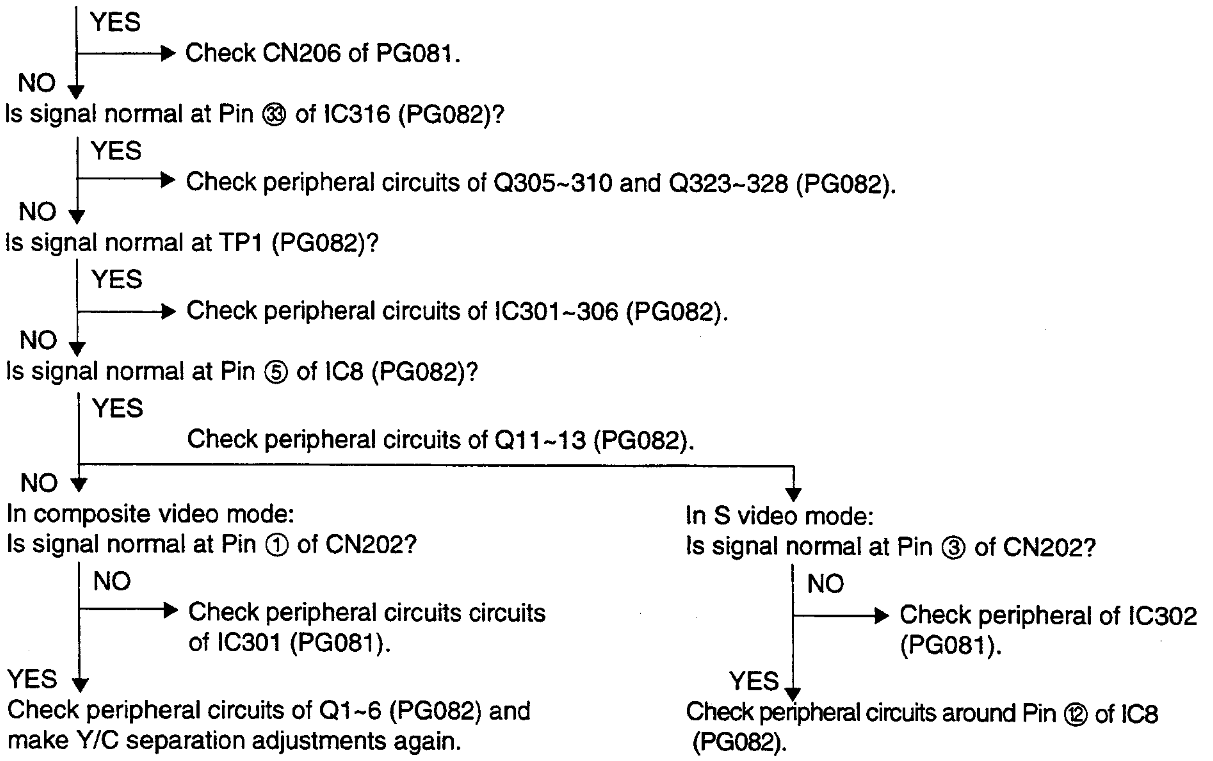
NO → Check peripheral circuits of IC303 (PG081).

YES ↓

Check peripheral circuits of around Pin ⑯ of IC8.

8-2. Contrast Defective (Video only)

Are signal levels normal at TP15, 16, and 17 (PG082)?



YES → Check CN206 of PG081.

NO ↓

Is signal normal at Pin ㉝ of IC316 (PG082)?

YES → Check peripheral circuits of Q305~310 and Q323~328 (PG082).

NO ↓

Is signal normal at TP1 (PG082)?

YES → Check peripheral circuits of IC301~306 (PG082).

NO ↓

Is signal normal at Pin ⑤ of IC8 (PG082)?

YES Check peripheral circuits of Q11~13 (PG082).

NO ↓

In composite video mode:
Is signal normal at Pin ① of CN202?

NO → Check peripheral circuits circuits of IC301 (PG081).

YES ↓

Check peripheral circuits of Q1~6 (PG082) and make Y/C separation adjustments again.

In S video mode:
Is signal normal at Pin ③ of CN202?

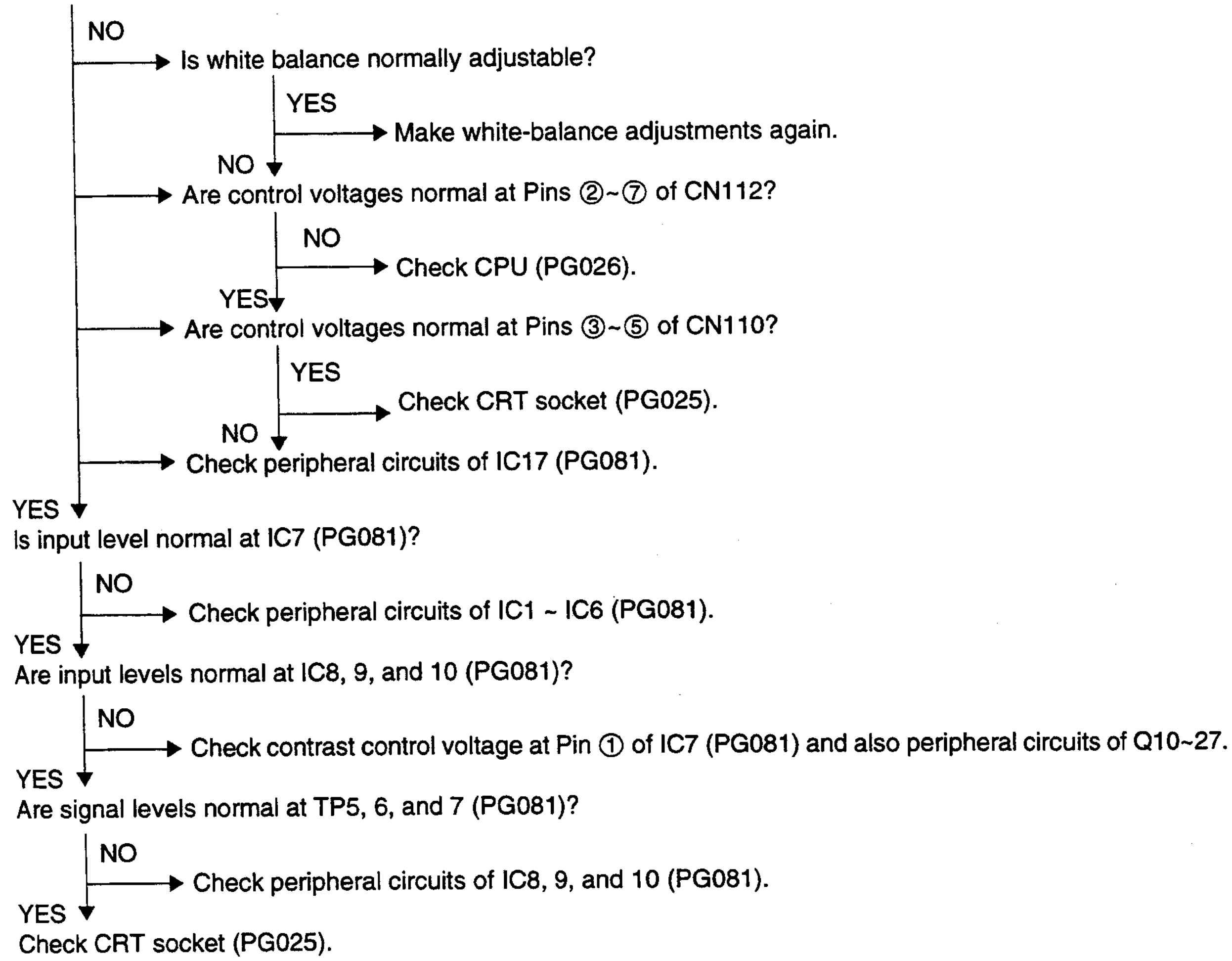
NO → Check peripheral of IC302 (PG081).

YES ↓

Check peripheral circuits around Pin ⑫ of IC8 (PG082).

8-3. Contrast Defective (Both video and RGB)

Are white-balance adjustments correctly effected?



NO → Is white balance normally adjustable?

YES → Make white-balance adjustments again.

NO → Are control voltages normal at Pins ②~⑦ of CN112?

NO → Check CPU (PG026).

YES → Are control voltages normal at Pins ③~⑤ of CN110?

YES → Check CRT socket (PG025).

NO → Check peripheral circuits of IC17 (PG081).

YES

Is input level normal at IC7 (PG081)?

NO → Check peripheral circuits of IC1 ~ IC6 (PG081).

YES

Are input levels normal at IC8, 9, and 10 (PG081)?

NO → Check contrast control voltage at Pin ① of IC7 (PG081) and also peripheral circuits of Q10~27.

YES

Are signal levels normal at TP5, 6, and 7 (PG081)?

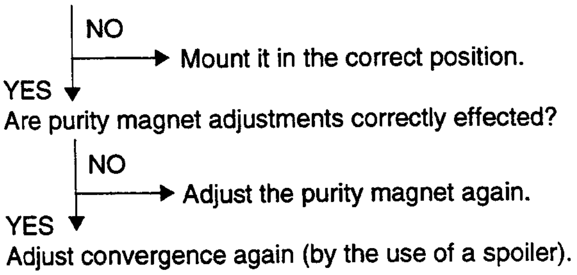
NO → Check peripheral circuits of IC8, 9, and 10 (PG081).

YES

Check CRT socket (PG025).

9. Convergence Defective

Is mounting position of the purity magnet correct?



NO → Mount it in the correct position.

YES

Are purity magnet adjustments correctly effected?

NO → Adjust the purity magnet again.

YES

Adjust convergence again (by the use of a spoiler).

10. Focus Defective

Is dynamic focus waveform correct (at DF OUT)?
NO
→ Is adjustment possible with a remote control?
NO
→ Check peripheral circuits of QE019~022 and ICG002~006.
YES ↓
→ Adjust dynamic focus again.
YES ↓
Are static focus adjustments correctly effected?
NO
→ Adjust static focus again.
YES ↓
Check FBT, focus lead wires, CRT socket, etc.

11. Remote Control Not Effective

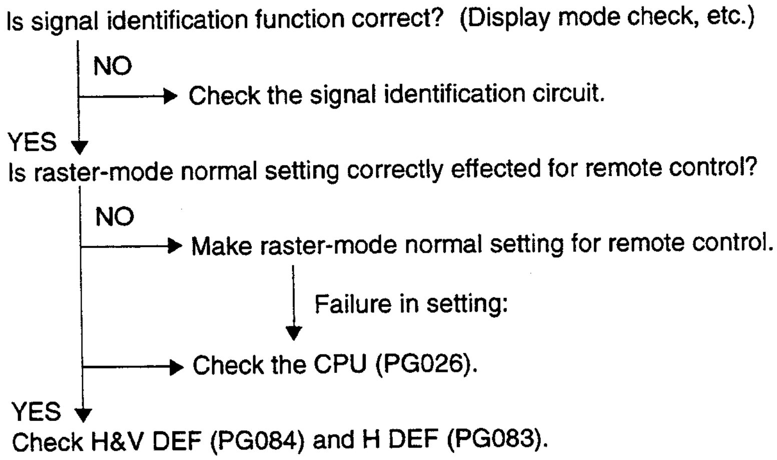
Wireless only:	Wired only:	Both wireless and wired:
↓	↓	↓
Check CN808 Pin ②, CN811 Pin ④, CN812 Pin ⑧, IC1001, ICB032, R0092, etc.	Check remote control cable, remote control jack, etc.	Check ICB023, 030, 032, CN808, 904, remote control jack, ICB001 Pin ⑥, etc.

12. Purity Defective

Is DEGAUSS in operation? (With the remote-control DEGAUSS switch)
NO
→ Check CN807, CNA4 Pin ⑤, RLJ001, PTJ001~003, degauss coil, etc.
YES ↓
Is the magnetic field normal? (There shall be no speaker, magnet, and the like in the vicinity.)
NO
→ Eliminate the problem. (Apply degaussing.)
YES ↓
Are conditions normal for the mounting and adjustment of purity magnet?
NO
→ Adjust the purity magnet again.
YES ↓
Check CRT.

13. Digital Control Defective

13-1.Raster



Is signal identification function correct? (Display mode check, etc.)

NO → Check the signal identification circuit.

YES ↓

Is raster-mode normal setting correctly effected for remote control?

NO → Make raster-mode normal setting for remote control.

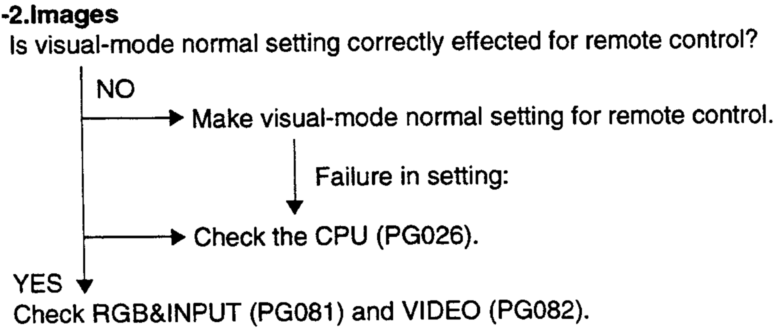
↓ Failure in setting:

→ Check the CPU (PG026).

YES ↓

Check H&V DEF (PG084) and H DEF (PG083).

13-2.Images



Is visual-mode normal setting correctly effected for remote control?

NO → Make visual-mode normal setting for remote control.

↓ Failure in setting:

→ Check the CPU (PG026).

YES ↓

Check RGB&INPUT (PG081) and VIDEO (PG082).

CIRCUIT DESCRIPTION

1. RGB & INPUT PWB (PG081)

1-1 Input Signal Changeover

Selection of R.G.B. input signal changeover for RGB1 (D-SUB) and RGB2 (BNC) is effected by a switcher circuit of IC1, IC2, and IC3, and the selected signals are sent toward IC4, IC5, and IC6.

Selection of composite video input signal changeover for VIDEO1 (BNC) and VIDEO2 (BNC) is effected by a switcher circuit of IC301. Selection of S video input signal changeover for VIDEO1 (S terminal) and VIDEO2 (S terminal) is effected by a switcher circuit of IC302 (Y signal) and IC303 (C signal).

For changeover between composite video and S video, S video is automatically selected when a connector is inserted in the IN side of the S terminal. Signal changeover is effected by PG082, VIDEO PWB, and IC8. Signals selected by IC301, IC302, and IC303 are sent to PG082 and VIDEO PWB, and put into color demodulation, double-speed processing, and R.G.B. conversion. The resultant signals are entered in IC4, IC5, and IC6 of PG081 RGB & INPUT PWB.

The switcher circuit consisting of IC4, IC5, and IC6 is used for the selection of RGB input and VIDEO input.

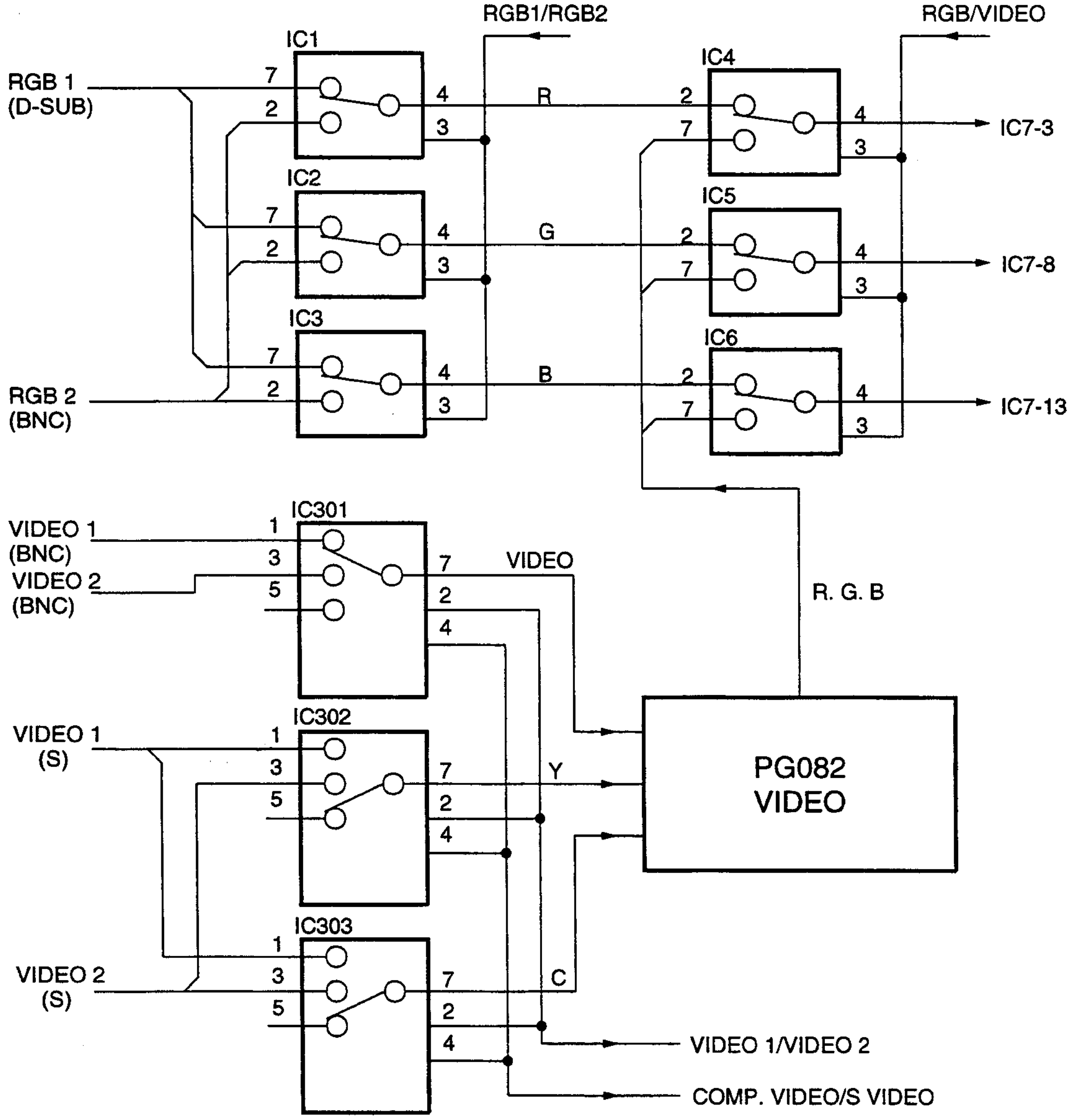
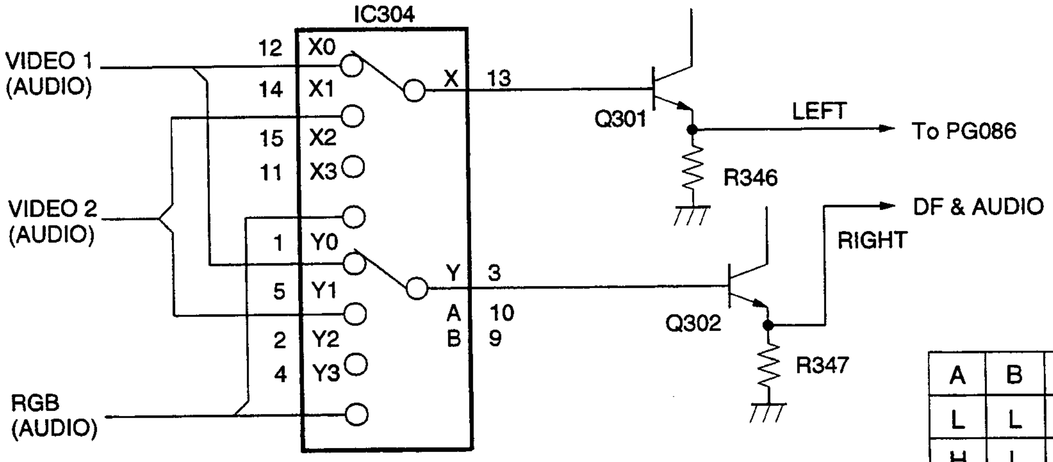

RGB1/RGB2
RGB/VIDEO
IC1
IC2
IC3
IC4
IC5
IC6
RGB 1
(D-SUB)
RGB 2
(BNC)
R
G
B
IC7-3
IC7-8
IC7-13
R. G. B
IC301
IC302
IC303
VIDEO 1
(BNC)
VIDEO 2
(BNC)
VIDEO 1
(S)
VIDEO 2
(S)
VIDEO
Y
C
PG082
VIDEO
VIDEO 1/VIDEO 2
COMP. VIDEO/S VIDEO

Fig. 1

Changeover of audio signals is effected in conjunction with RGB, VIDEO1, and VIDEO2. An audio signal entered in each input connector is selected by a switcher circuit of IC304, and then converted into a low-impedance signal by the emitter follower circuit of Q301 and Q302. Signals are then sent to PG086 DF and AUDIO PWB.


IC304
VIDEO 1
(AUDIO)
VIDEO 2
(AUDIO)
RGB
(AUDIO)
12
14
15
11
1
5
2
4
X0
X1
X2
X3
Y0
Y1
Y2
Y3
X
Y
A
B
13
3
10
9
Q301
Q302
LEFT
To PG086
DF & AUDIO
RIGHT
R346
R347

A	B	Channel
L	L	VIDEO 1
H	L	VIDEO 2
H	L	RGB

Fig. 2

1-2 Contrast and Drive Gain Control

The signal output from IC4, IC5, and IC6 enters IC7. IC7 provides functions of DC reproduction, contrast control, drive control, and OSD mixing. For contrast control, the control voltage transmitted from the CPU (PG026 PWB) is applied to Pin 17 of IC7 through the ABL circuit that is composed of Q45 and IC17.
For drive gain control, the control voltage from the CPU is directly applied to Pins 4, 9, and 14 of IC7, so that gains of R,G,B are respectively controlled. For DC reproduction, stabilized black level reproduction is effected, by suppressing a change in the pedestal potential due to APL variations. DC reproduction is actually possible by applying back-porch-synchronized clamp pulses to Pin 18 of IC7.

1-3 OSD System

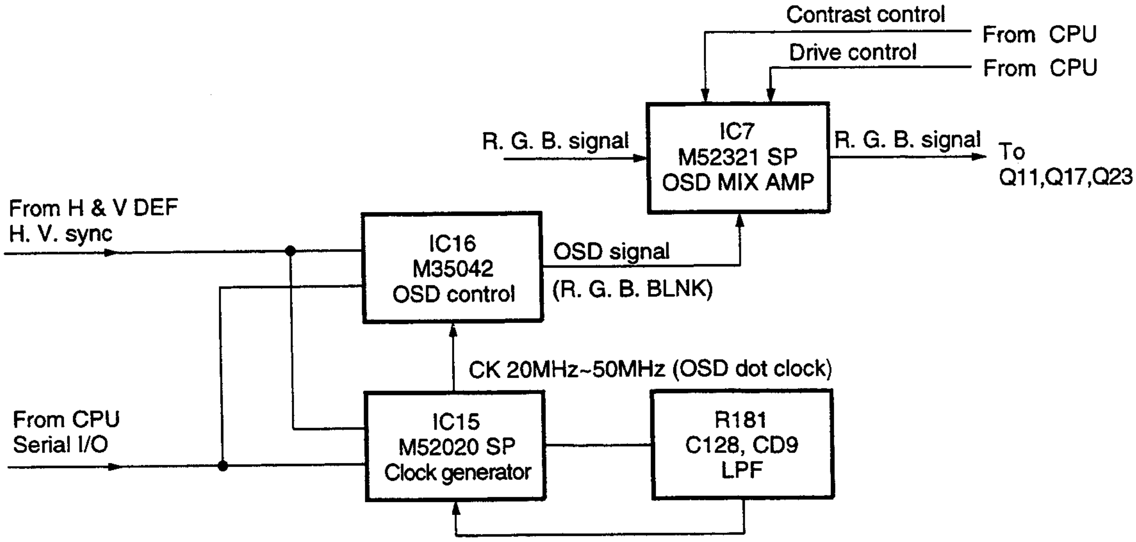

Contrast control
From CPU
Drive control
From CPU
R. G. B. signal
IC7
M52321 SP
OSD MIX AMP
R. G. B. signal
To
Q11,Q17,Q23
From H & V DEF
H. V. sync
IC16
M35042
OSD control
OSD signal
(R. G. B. BLNK)
CK 20MHz~50MHz (OSD dot clock)
From CPU
Serial I/O
IC15
M52020 SP
Clock generator
R181
C128, CD9
LPF

Fig. 3

Fig. 3 shows a block diagram of the OSD system. The H.V. sync. signal from PG084 HLV DEF circuit is entered in the clock generator of IC15. Based on the sync. signal entered, IC15 sets up a programmable divider by the use of serial data from the CPU of PG026, controls the internal VCO, and generates a clock signal of 20MHz to 50MHz, in phase with the sync. signal. This signal is entered in the OSD controller of IC16, to be used as an OSD dot clock. IC16 generates a sync. signal and also an OSD signal (R, G, B, BLK) synchronized with the OSD dot clock. This OSD signal is mixed up with the R.G.B. video signal in IC7.

1-4 R.G.B. Pre-AMP and Output AMP

Since the same circuit is used for R, G, and B, descriptions below are concerned only with the R channel.

Low-Pass Filter (Fig. 4):

The low-pass filter is composed of R63, C51, and Q102. Using S7-6 (Dip SW1), filter ON/OFF is effected by controlling the base potential of Q10. The cutoff frequency fc is given by the following expression:

$$fc = \frac{1}{2\pi C51\ (R0+R63)}$$

Practically, the fc value is set at 20MHz. The roll-off characteristics are used at 20MHz and thereafter. This arrangement is useful in cutting off a high-frequency component if there arise interference fringes (moire) due to the effect of CRT stripe pitch and high-components of video signals.

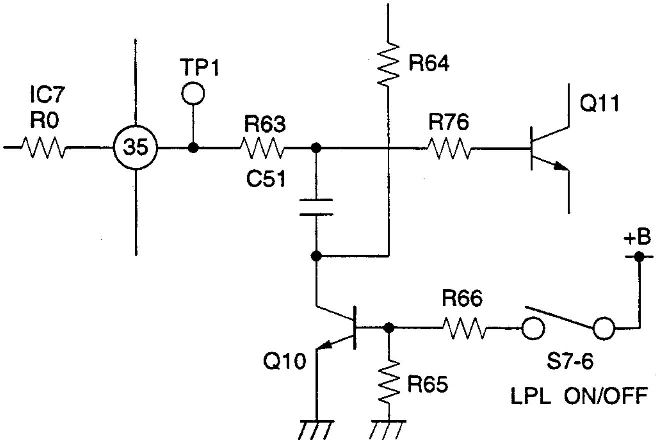


Fig. 4

BLK Pulse Addition (Fig. 5):

The BLK pulse addition circuit is composed of Q11 and Q12. H.V. pulses synchronized with the sync. signal are sent from the deflection circuit and applied to the base of Q12. Q12 is turned on while these pulses are positive, and turned off when they are negative. When Q12 is turned off, Q11 functions as an emitter-follower circuit and a video signal output is applied to the emitter of Q11. When Q12 is turned on, the Q11 emitter assumes a negative bias against the base. Then Q11 is turned off and the waveform assumes a condition that BLK pulses are attached, as shown in Fig. 6-Ⓑ. These BLK pulses are used for peak clamp of DC reproduction in the PG025 CRT socket circuit at the latter stage.

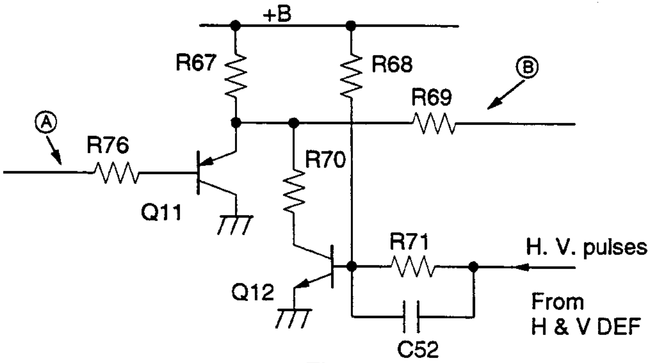


Fig. 5

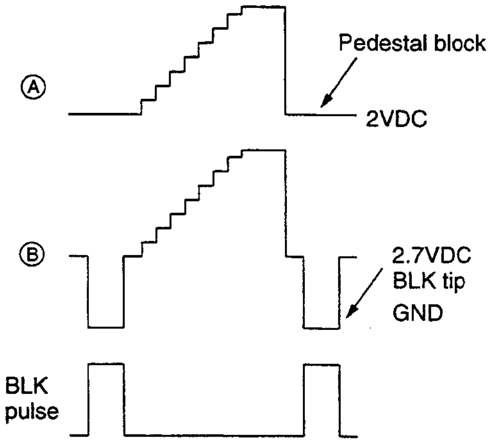


Fig. 6

Pre-AMP and Output AMP (Fig. 7):
A pre-amplifier with an amplification degree of 1.5 times is composed of Q13 ~ Q15. The video level at Pin 35 of IC7 is set at 2.7Vp-p for maximum contrast. The pre-amplifier of Q13 ~ Q15 is used to obtain a video level of 4.0Vp-p and its output is applied to the output amplifier of IC8.
IC8 is a hybrid IC with a band width of 50MHz (–3dB) and an amplification degree of 30 times. IC8 provides a video level of 120Vp-p, which is used to drive the CRT cathode.

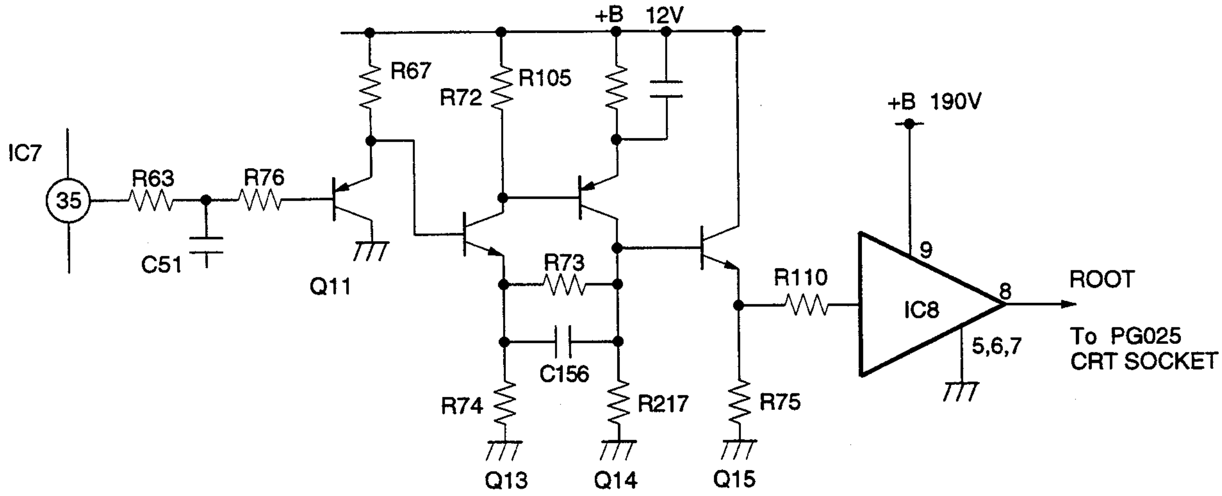


Fig. 7

1-5 Sync. Processing

The separate sink (Hs, Vs) and composite sink (Cs) of RGB1 input and RGB2 input are received at the emitter-follower circuit of Q34 ~ Q37.
Q34 is used for Hs, Cs of RGB1 input, Q35 is for Vs of RGB1 input, Q36 is for Hs, Cs of RGB2 input, and Q37 is for Vs of RGB2 input.
The emitter output of Q34 ~ Q37 is entered in IC11, and used for the selection of RGB1 input and RGB2 input. For the sync. signal selected by IC11, the sync. tip is clamped at 5V DC by Q39 and Q40. The sync. signal, whose tip has been clamped, is trimmed into a sync. signal with a constant level (1.5Vp-p) by the comparator circuit of IC12.
IC13 is used for the sync. selection of RGB input and VIDEO input. IC13 receives three types of sync. signals; separate sink, composite sink, and sink on green. It is a sync. processor IC that performs both automatic sync. selection and sync. separation. A horizontal sync. output is applied to Pin 15 of IC14, a vertical sync. output is applied to Pin 13 of IC14, and a clamp pulse is output to Pin 17 of IC14.
The horizontal sync. signal passes through IC22 (1/4 2/4), and is then converted into a low-impedance signal by the relative emitter-follower circuit consisting of Q41 and Q42. The vertical sync. signal is converted into a low-impedance signal by the relative emitter-follower circuit of Q43 and Q44. These horizontal and vertical sync. signals are sent to the CPU PWB of PG026 and the H&V DEF PWB of PG084.

2. VIDEO PWB (PG082)

2-1 Y/C Separation (comb filter)

A digital comb filter is adopted since it can cope with both HTSC and PAL systems. By adaptive in-field (two-dimensional) processing, Y/C separation can be effected with performance characteristics, higher than those of conventional line comb types.

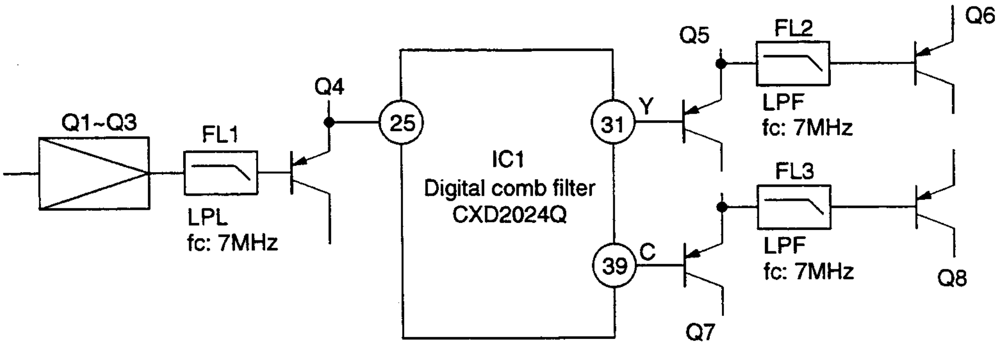

Q1~Q3
FL1
LPL
fc: 7MHz
Q4
25
IC1
Digital comb filter
CXD2024Q
31
Y
39
C
Q5
FL2
LPF
fc: 7MHz
Q6
FL3
LPF
fc: 7MHz
Q7
Q8

Fig. 8

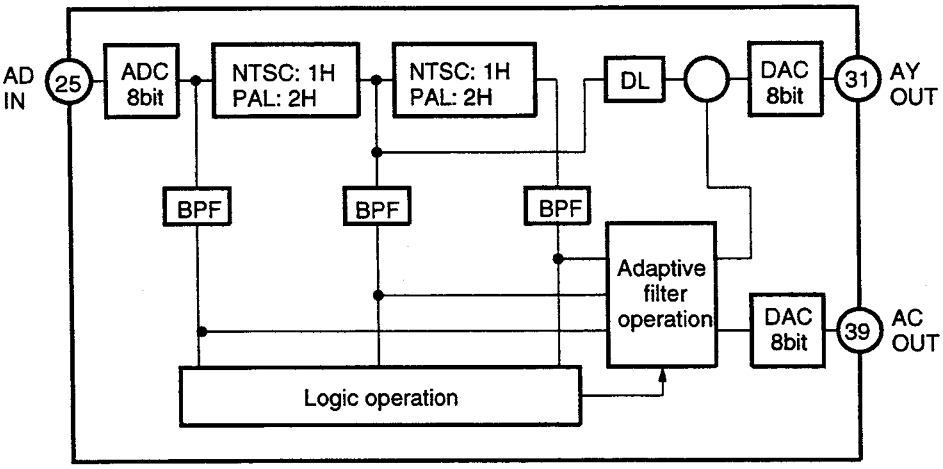

AD
IN
25
ADC
8bit
NTSC: 1H
PAL: 2H
NTSC: 1H
PAL: 2H
DL
DAC
8bit
31
AY
OUT
BPF
BPF
BPF
Adaptive
filter
operation
DAC
8bit
39
AC
OUT
Logic operation

Fig. 9 Block Diagram of CXD2024Q

Fig. 8 shows a block diagram.
The composite video signal entered from Pin 1 of CN202 is amplified twice by the amplifier of Q1 ~ Q3. FL1 is a low-pass filter with a cut-off frequency fc of 7MHz. This filter is used to prevent fold-back noise generated in digital processing at the latter stage. The digital comb filter of IC1 is used for the processing at the quantized bit number of 8 bits and a sampling frequency of 14.3MHz for NTSC or 17.7MHz for PAL. The Y/C-separated signal contains harmonic noise generated by the sampling frequency. FL2 and FL3 are low-pass filters intended to eliminate the above-mentioned harmonic noise. Their cut-off frequency is set at 7MHz.

The Y/C signal output from Q6 and Q8 is used for the selection of Y/C signal of S video, by the aid of switcher circuit consisting of IC8.
The Y signal coming from IC8 is transmitted to the double-speed circuit after processing to deal with time difference from the color demodulation signals (R-Y, B-Y) in the delay circuit consisting of Q11 ~ Q13 and FL4. F4 is a delay line that has a delay time of 250ms.

2-2 Color Demodulation Circuit

The C signal output from IC8 is applied to Pin 22 of IC2. The color demodulator circuit is composed of IC2 and its peripheral circuits. IC2 is used in common for PAL and NTSC, and is in charge of ACC/color killer detection, identic detection, APC detection, sub-carrier oscillation, NTSC hue control, and chroma demodulation.

2-3 Sub-Carrier 4-Multiply Circuit

Sub-carrier signals of 3.58MHz/4.43MHz obtained by oscillation at IC2 are sent from the emitter-follower circuit of Q24, and then entered in IC3. Fig. 10 shows a block diagram. IC3 generates a X4 frequency synchronized with the sub-carrier by PLL operation. This oscillation output is used as a clock signal for the digital comb filter of IC1, and for a CCD 1H delay line for PAL of IC4.

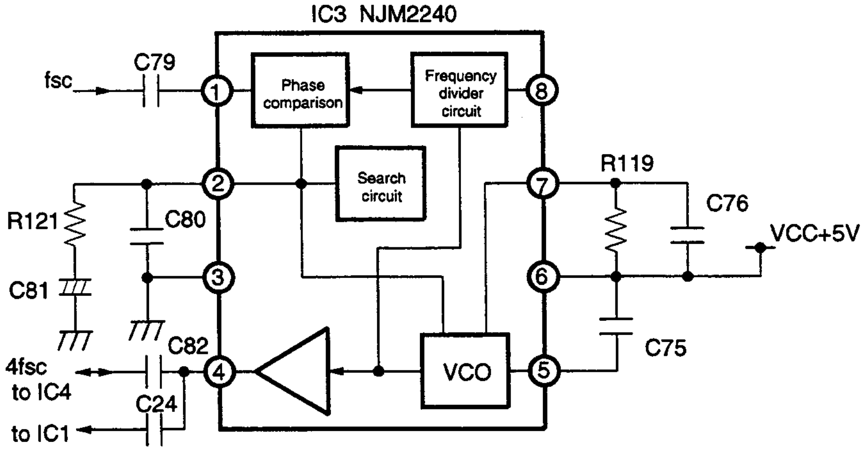

IC3 NJM2240
fsc
C79
Phase comparison
Frequency divider circuit
Search circuit
VCO
R119
C76
VCC+5V
R121
C80
C81
C82
C75
C24
4fsc to IC4
to IC1
1
2
3
4
5
6
7
8

Fig. 10

2-4 PAL 1H Delay, U/V Separation

Fig. 11 shows the block diagram.
A chroma signal output from Pin 31 of IC2 enters IC4. The IC4 interior is composed of a 1,130-bit shift register and a 16-bit S/H, and functions as a 1H CCD delay line for PAL. A delay of 1H (64µs) is obtainable, including BPF for Q27, L9, and T1.
For U/V separation, a center tap (Pin 2) is provided to the secondary winding of T1 and a U/V signal is obtained by applying a chroma signal to this center tap before the delay of 1H.

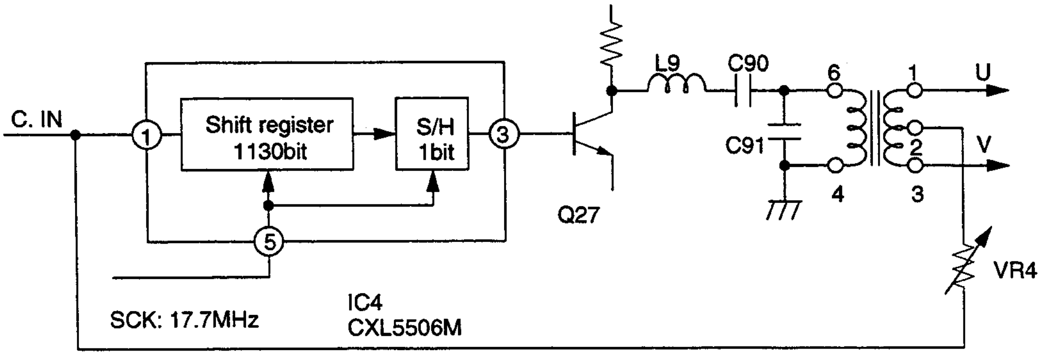

C. IN
Shift register 1130bit
S/H 1bit
1
3
5
SCK: 17.7MHz
IC4 CXL5506M
Q27
L9
C90
C91
6
1
4
2
3
U
V
VR4

Fig. 11

2-5 Double-Speed Conversion (Non-interlace processing)

For double-speed conversion, in-field processing is effected by the line memory and scanning lines are doubled as a result.

The 4:2:2 chrominance component system is adopted, since it is useful in disposing of NTSC, PAL, and non-standard signals (LD, VTR).

Generation of clock signals:

The clock signals obtained are quite stable even for non-standard signals, by the use of a line lock system synchronized with horizontal sync. signal. The clock frequency is 28.6MHz, which is 1820 times the horizontal sync. frequency.

Fig. 12 shows the block diagram.

The oscillator circuit is composed of IC312, which contains PLL and VLO. A multiplied clock signal can be externally obtained through frequency division of a VCO output.

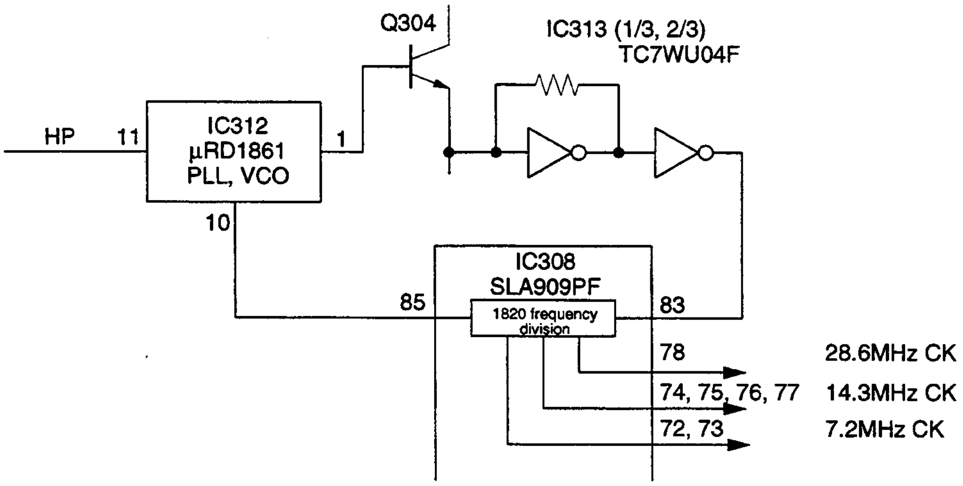

Q304
IC313 (1/3, 2/3)
TC7WU04F
HP
11
IC312
µRD1861
PLL, VCO
1
10
IC308
SLA909PF
85
1820 frequency division
83
78
28.6MHz CK
74, 75, 76, 77
14.3MHz CK
72, 73
7.2MHz CK

Fig. 12

A/D conversion:

A/D conversion is effected by IC301, IC302, and IC303.

IC301 is a yellow-signal ADC, which operates with 8 bits (Level 0~255) of quantized bits at a sampling rate of 14.3MHz. The pedestal block is clamped around Level 64. IC302 and IC303 are DDCs for chrominance signals (R-Y, B-Y). They function with 8 bits of quantized bits, at a sampling rate of 7.2MHz. The pedestal block is clamped at about level 128. The positive peak block is set at about level 205, while the negative peak block is set at about level 51.

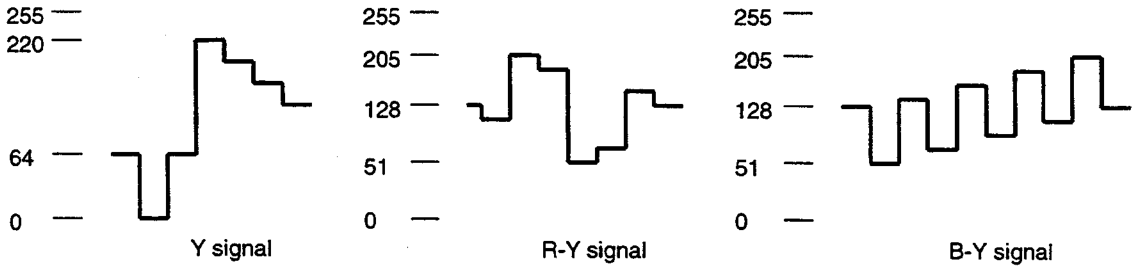

255
220
64
0
Y signal
255
205
128
51
0
R-Y signal
255
205
128
51
0
B-Y signal

Fig. 13

Y-signal line interpolation, vertical profile correction (V.APT):
Fig. 14 shows the block diagram.
For line interpolation, mean-value interpolation is effected by IC304 (line memory) that averages the present signal and a signal obtained after 1H DLY. For V.APT, a vertical edge component is extracted by composing a primary bandpass filter in vertical direction, using two line memories of IC304 and IC305. This signal is added to the Y-signal through a non-linear circuit that consists of core-ring, gain control, and limitter circuits.
APT gain control is adjustable with serial bus data from CPU #15.

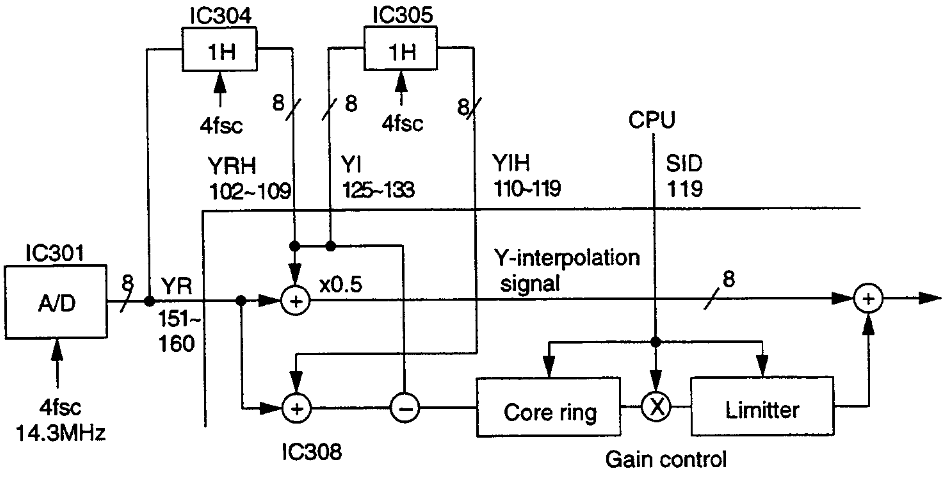

IC304
1H
4fsc
8
IC305
1H
4fsc
8
8
CPU
YRH
102~109
YI
125~133
YIH
110~119
SID
119
IC301
A/D
8
YR
151~
160
x0.5
Y-interpolation
signal
8
4fsc
14.3MHz
IC308
Core ring
Limitter
Gain control

Fig. 14

Double-speed conversion:
Fig. 15 shows the block diagram.
The Y-signal processed through line interpolation is converted into a double-speed signal by the line memory of IC314 and IC315.
The write and read clock signals are driven at 14.3MHz and 28.6MHz, respectively. In this manner, the read-out timing is reciprocally secured to convert signals into double-speed Y-signals. The resultant signal is converted into an analog signal by DAC of IC316.

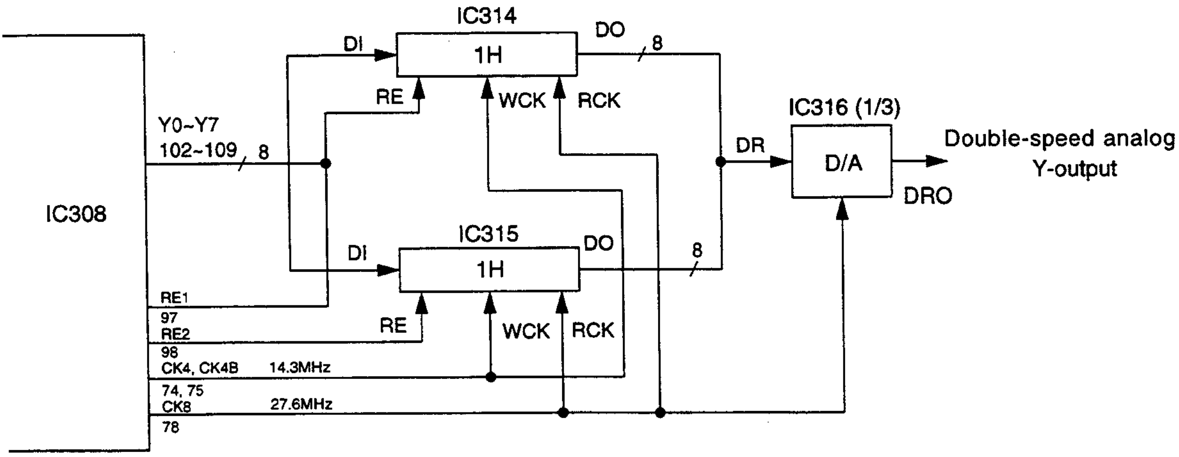

IC314
DI
1H
DO
8
RE
WCK
RCK
Y0~Y7
102~109
8
IC316 (1/3)
DR
D/A
Double-speed analog
Y-output
DRO
IC308
IC315
DI
1H
DO
8
RE1
97
RE2
98
CK4, CK4B
14.3MHz
74, 75
CK8
27.6MHz
78
RE
WCK
RCK

Fig. 15

Chroma signal time-division multiplex processing:
Fig. 16 shows the block diagram.
Since the frequency band of the chroma signal (R-Y, B-Y) is as narrow as 1.5MHz or less, signal multiplexing is effected by time division, in order to simplify the overall circuit. The output signals from IC302 and IC303 are used for signal multiplexing through reciprocal signal changeover at a period of 2fsc (7.2MHz) by the internal multiplexer circuit of IC8.

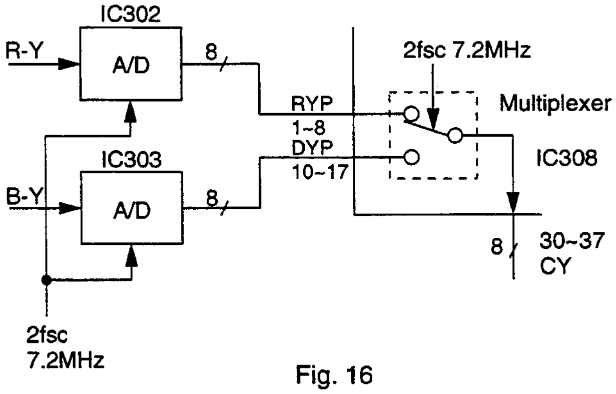

IC302
R-Y
A/D
8
IC303
B-Y
A/D
8
RYP
1~8
DYP
10~17
2fsc 7.2MHz
Multiplexer
IC308
8
30~37
CY
2fsc
7.2MHz

Fig. 16

Double-speed conversion, line interpolation:
Fig. 17 shows the block diagram.
The chroma signal converted into a time-division multiplex signal is put into double-speed conversion by IC306 (line memory). The write and read clock signals are driven at 14.3MHz (4fsc) and 28.6MHz (8fsc), respectively. The same data are read out twice to obtain a double-speed signal.
Using this signal and IC307 (line memory), a signal of 1H delay is added to perform averaged interpolation.

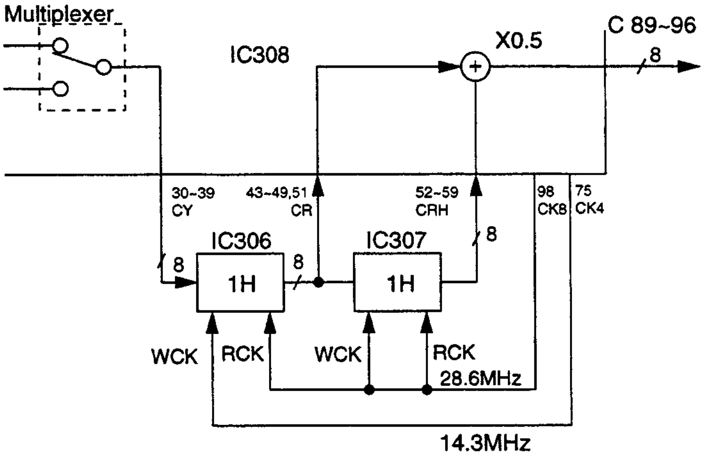

Multiplexer
IC308
X0.5
C 89~96
8
30~39
CY
43~49,51
CR
52~59
CRH
98
CK8
75
CK4
IC306
1H
8
8
IC307
1H
8
WCK
RCK
WCK
RCK
28.6MHz
14.3MHz

Fig. 17

Time compensation, D/A conversion

If a signal from averaged interpolation is immediately used for D/A conversion, a chroma signal is output with a 1H lead than the Y-signal , at a double-speed rate. IC321 (line memory) is a 1H delay line to make adjustment to this lead lime. The time-division multiplexed chroma signal is entered in parallel to IC316 of DAC for R-Y and B-Y at a sampling rate of 28.6MHz (8fsc). When the sampling clock of DAC for R-Y and B-Y is driven by a clock signal of 14.3MHz (4fsc) that has a mutual phase difference of 180°, a signal sent after time division can again be converted into former analog signals of R-Y and B-Y.

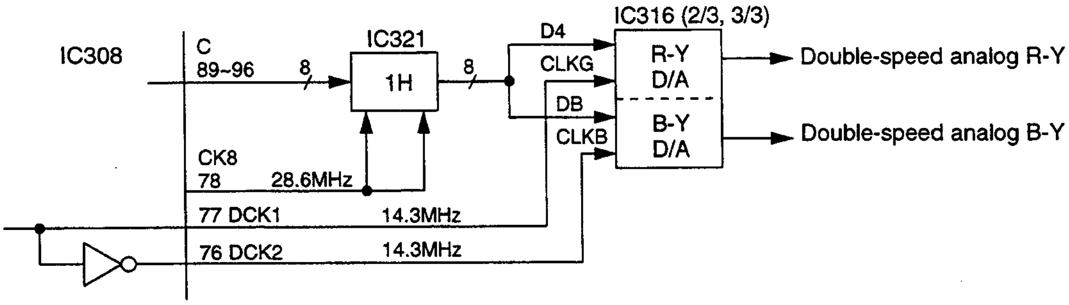


Fig. 18

2-6 Double-Speed Analog Signals

Y-signal:

The Y-signal output coming from DAC enters the amplifier circuit consisting of Q305 ~ Q307. This amplifier circuit has an amplification degree of about 3.5 times, intended to cover the level loss for LP301 and DL301 at the latter stage.

LP301 is used as a low-pass filter intended to eliminate harmonics (noise) generated during digital processing. Its cutoff frequency fc is set at 14MHz. DL301 is a delay line for horizontal profile correction. Its delay time Td is set at 70ms.

Q10 is used as an emitter-follower circuit that converts impedance (1kΩ) of a signal output from DL301 into a lower impedance. The output signal from the emitter of Q10 is sent to the RGB matrix circuit through L325 and L326.

L325, L326, C477, and C478 are used to compose a delay circuit intended to delay an original signal by 20ms, since the horizontal profile correction signal is delayed in the gain control circuit of IC317 by about 20ms than the original signal.

R-Y and B-Y signals:

The R-Y signal output from DAC enters the amplifier circuit consisting of Q315 ~ Q317. This circuit has an amplification degree of about 1.5 times. L319, L320, C426, and C427 are used to compose a low-pass filter intended for the elimination of harmonic noise generated during digital processing. The cutoff frequency is set at 3MHz. Low-impedance conversion is effected at the emitter-follower circuit of Q318, and the resultant signal is sent to the RGB matrix circuit.

The B-Y signal also passes through a similar circuit configuration as for the R-Y signal, and is sent to the RGB matrix circuit.

RGB matrix circuit

$$R = Y + (R\text{-}Y)$$
$$G = Y - \{(R\text{-}Y) + (B\text{-}Y)\} = Y + (G\text{-}Y)$$
$$B = Y + (B\text{-}Y)$$

Conversion of a chroma signal into an RGB signal conforms to the above formulas. The matrix circuit has a circuit configuration, with a principle of a base earthed. Q323 and Q324 are used to compose an R matrix circuit, while Q327 and Q328 are used to set up a B matrix circuit. Addition of Y-signal and a chroma signal is effected at the emitters of Q323 and Q327, to obtain R and B signals.

Q325 and Q326 are used to compose a G matrix circuit. The -(G-Y) signal, resulting from addition of the R-Y signal and the B-Y signal, is entered in the base of Q325. As a result, G-signal is obtained by adding Y-signal from the emitter.
The emitters of Q323, Q325, and Q327 are used for the addition of horizontal profile correction signal (H.APT).

Horizontal profile correction (H.APT):

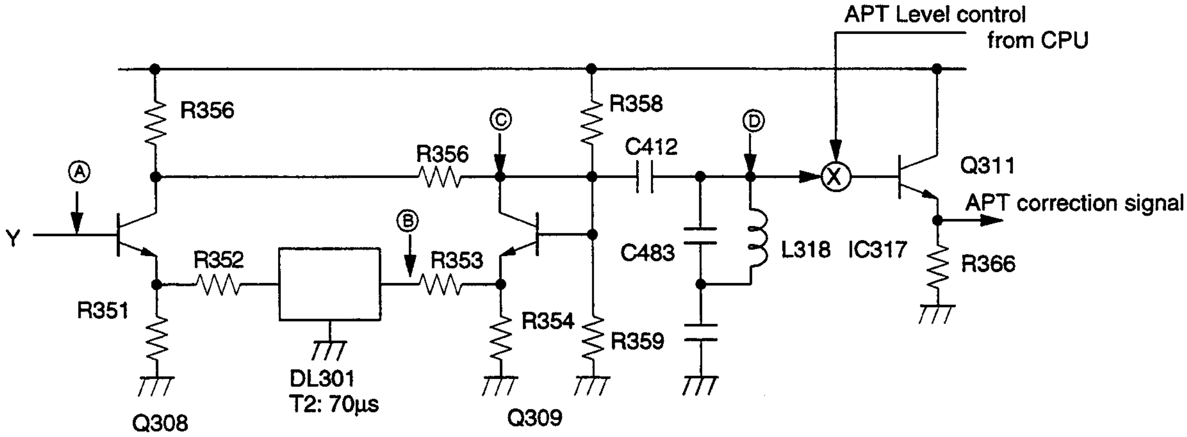

APT Level control
from CPU
R356
Ⓒ
R358
Ⓓ
Ⓐ
R356
C412
Q311
APT correction signal
Y
Ⓑ
R352
R353
C483
L318
IC317
R366
R351
R354
R359
DL301
T2: 70μs
Q308
Q309

Fig. 19

The Y-signal Ⓐ entered in Q308 is entered in Q309 with a delay time of Td, set up by the delay line of DL301 Ⓑ. The collector of Q309 is connected to that of Q308 through a resistor of R356. Since the collector of Q308 generates a phase-reversed Y-signal, the collector of Q309 functions as a band-pass filter Ⓒ with a peak of boost frequency fo, as shown in the formula below.

$$fo = \frac{1}{2\pi Td} = 7.1MHz$$

Td : 2Dms

The waveform obtained from the collector of Q309 comes in a primary differential waveform. It is processed for secondary differentiation by L318 and C483, so that the APT waveform can be corrected Ⓓ. IC317 is used as a multiplier, where the APT correction level is controlled. The APT correction signal passes through Q311, and is then sent to the RGB matrix circuit.

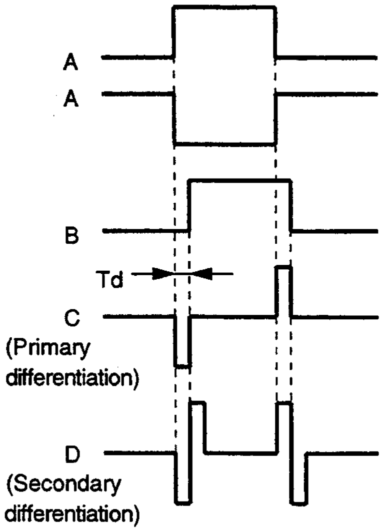

A
A
B
Td
C
(Primary
differentiation)
D
(Secondary
differentiation)

Fig. 20

[Operation of the CPU Block]

This circuit block comes in a multi-chip configuration. It can roughly be divided into a main CPU block consisting of IC1, 2, 3, a memory block consisting of IC4, 5, 6, a timer block consisting of IC11 and 12, an external interface block consisting of IC15, 16, 17, a DA control block consisting of IC18, 19, 20, a horizontal frequency counting block consisting of IC22, 23, 24, and a horizontal oscillation frequency control block consisting of IC 25, 26, 27. Each block is connected to a signal line called the bus line, and controlled by the main CPU block.

① Main CPU block

IC1 is a microcomputer that is a core device for this circuit block. For data exchange, it is connected to each block through a data bus (D0 ~ D7) of Terminals $\boxed{12}$ to $\boxed{19}$ and an address bus (A0 ~ A15) latched by signals from Terminals $\boxed{21}$ to $\boxed{28}$ and Terminals $\boxed{12}$ to $\boxed{19}$ at IC3, according to the address latch output signal at Terminal $\boxed{30}$.

Terminal $\boxed{34}$ is an output terminal used to select a control block. A memory block can be chosen at LOW (0V) level, and any other block can be selected when the level is high (5V).

Terminal $\boxed{31}$ is an output terminal used to control data read-out for other blocks. At a LOW level, data input from the selected device is effected through the data bus.

Terminal $\boxed{32}$ is an output terminal used to control data write-in for other blocks. At a LOW level, data output to the selected device is effected through the data bus.

Terminal $\boxed{6}$ is an input terminal used to identify entry of a remote control signal.

Terminal $\boxed{7}$ is a timing signal input terminal for remote control data counting. This terminal is used to enter a reference pulse signal for the discrimination of remote control data code.

Terminal $\boxed{8}$ is a timing signal input terminal for timer control. This terminal is used to enter a reference pulse signal for the control of software processing time.

Terminal $\boxed{9}$ is a terminal of vertical sync signal input. It is used to count the vertical frequency.

Terminals $\boxed{1}$ and $\boxed{2}$ are input terminals of clock signals, which are the standard for micro-computer operation. Sine waves of 10MHz are entered there..

IC2 is an IC for power supply supervision. If the source voltage lowers for a certain reason and microcomputers do not operate normally, Terminal $\boxed{36}$ of IC1 reset input is turned low through Terminal $\boxed{3}$ of IC2 output so that each microcomputer is initialized and restored to normal.

② Memory block

Data are output and held by control signals from the main CPU block.

IC4 is used to output program data to a microcomputer since such a program for micro-computer control is written in EP-ROM.

IC5 is used to read and write data for processing in the S-RAM.

IC6 is used to read and write various control data since control data for screens and functions, such as raster data and visual data, are stored in the EEP-RAM. If data are exchanged by remote control or the like, those data are updated and stored.

③ Timer block

According to control signals from the main CPU block, pulse signals with preset timing are output.

Timer output of IC11:

Terminal $\boxed{10}$ generates a pulse signal (138µs/1.4ms) that is used as a standard for the discrimination of remote control data code.

Terminal $\boxed{13}$ is used to generate pulses (1kHz) for driving a front pilot lamp.

Timer output of IC12:

Terminal $\boxed{10}$ generates a pulse signal (0.5ms) that is used as a standard to control software processing time.

Terminal $\boxed{13}$ is used to generate a pulse signal of 2ms at a LOW level. At that time, a vertical sync signal entered in Terminal $\boxed{14}$ is used as a trigger signal.

Terminal $\boxed{17}$ is used to generate a 4ms pulse signal during the LOW period. At that time, a pulse signal synchronized with the vertical sync signal input to Terminal 16 is used as a trigger signal. This signal is then transmitted to the horizontal frequency counting block.

④ External interface block

Receiving a control signal input from the outside, it is transferred to the main CPU block.
Major functions of IC15 are itemized below for each terminal.
Terminal $\boxed{4}$ is a degaussing control output terminal. A HIGH signal is output in the state of degauss ON.
Terminals $\boxed{2}$ and $\boxed{3}$ are power ON/OFF control terminals. A low output signal is applied to Terminals $\boxed{2}$ and $\boxed{3}$ when the power circuit is turned on with the POWER switch, remote control, or an external controller. When this device is turned off, a HIGH signal is applied to Terminals $\boxed{2}$ and $\boxed{3}$. While a power management function is in use, a HIGH signal is applied to Terminal $\boxed{2}$ and a LOW signal is applied to Terminal $\boxed{3}$ in SUSPEND mode. In OFF mode, a HIGH signal is output to both Terminals $\boxed{2}$ and $\boxed{3}$.
Terminal $\boxed{40}$ is a voice mute output terminal. When voice mute is effected with a remote control or an external controller, a HIGH signal is generated.
Terminals $\boxed{18}$ and $\boxed{19}$ are output terminals for input changeover control signal. The input changeover circuit is controlled through a matrix of HIGH and LOW at Terminals $\boxed{18}$ and $\boxed{19}$.
Terminal $\boxed{30}$ is a scan mode output terminal. A LOW signal is output during over-scan period.
Terminals $\boxed{21}$ to $\boxed{25}$ are used as horizontal linearity control output terminals. They generate both HIGH and LOW matrix signals according to the horizontal signal frequency.
Terminals $\boxed{14}$ to $\boxed{17}$ are sync signal status input terminals. Status signals for indicating sync signal polarity and mode are input.
Terminals $\boxed{11}$ to $\boxed{13}$ are control signal output terminals for the DA converter of IC18, 19, 20.
Major functions of IC16 are itemized below for each terminal.
Terminal $\boxed{4}$ is an external control ON/OFF input terminal. When a LOW signal is entered, the external control begins to function.
Terminal $\boxed{3}$ is an external control•power ON/OFF input terminal. When the external control is turned on, power is turned on when a LOW signal is applied to this terminal.
Terminals $\boxed{1}$ and $\boxed{2}$ are input terminals for external control input select signals. When the external control is turned on, an input is defined by HIGH and LOW matrix signals at Terminals $\boxed{1}$ and $\boxed{2}$.
Terminal $\boxed{40}$ is an external control voice mute input terminal. When the external control is turned on, a HIGH signal is applied to the voice mute output terminal when a LOW signal is applied to this terminal.
Terminal $\boxed{39}$ is a video mute input terminal. When the external control is turned on, data of the DA converter for video signal control are controlled to mute the video signal when a LOW signal is applied to this terminal.
Terminal $\boxed{38}$ is an external control•degauss control input terminal. When the external control is turned on and a LOW signal is applied to this terminal, a HIGH signal is output from the degauss control output terminal.
Terminal $\boxed{37}$ is an NTSC/PAL changeover input terminal. When a LOW signal is entered, NTSC is selected.
Terminal $\boxed{18}$ is a power management ON/OFF input terminal. When a LOW signal is entered, power management functions.
Terminal $\boxed{19}$ is a power-on-mode ON/OFF input terminal. When a LOW signal is entered, power-on mode functions.
Terminals $\boxed{20}$ and $\boxed{21}$ are power-on-mode matrix input terminals. Using HIGH/LOW matrix signals, an input is defined in power-on mode.
Terminal $\boxed{22}$ is a power switch ON/OFF input terminal. When a HIGH signal is entered in this terminal, power-on takes place.
Terminals $\boxed{23}$ to $\boxed{25}$ are rear key input and fan sensor input terminals. Signals of the rear switch and fan operating status are converted into matrix signals of HIGH and LOW by IC21, and the converted signals are entered in these terminals.
Terminals $\boxed{14}$ to $\boxed{16}$ are control output terminals of double-speed scan converter for video signals.
Terminal $\boxed{17}$ is an output terminal used for ON/OFF control of the front pilot LED amber.
Terminals $\boxed{10}$ to $\boxed{13}$ are output signals for on-screen control signals.
Major functions of IC17 are itemized below for each terminal.
Terminals $\boxed{1}$ to $\boxed{4}$, $\boxed{37}$ to $\boxed{40}$, and $\boxed{14}$ to $\boxed{16}$ are control output terminals of the DA converter (IC26) for horizontal oscillation control.

Terminals $\boxed{18}$ to $\boxed{25}$ and $\boxed{12}$ and $\boxed{13}$ are counting data input terminals for horizontal frequency discrimination.
Terminal 17 is an output terminal used for ON/OFF control of the front pilot LED green.
Terminal 11 is an input terminal for remote control data.
Terminal 10 is an ON/OFF control input terminal for on-screen display. When a LOW signal is applied, an ON screen is displayed.

⑤ **Horizontal frequency counting block**

The horizontal sync signal is counted in a period of 4ms contained in the vertical sync signal, in order to discriminate the horizontal frequency.
The horizontal sync signal and the 4ms pulse signal synchronized with the vertical sync signal, established by IC12 in the timer block, is processed at the AND gate. The resultant signal is counted by the 12-bit binary ripple counter of IC22 and converted into parallel data. Since then, the signal is applied to IC17.

⑥ **Horizontal oscillation frequency control block**

Based on the counting data entered from the horizontal frequency counting block, control data output from the memory is received through the output port of IC17 and a DC bias is generated to control the horizontal oscillation frequency in the H.DEP board.
The signal from the output port of IC17 is converted into DC voltage by the 10-bit DA converter of IC28. This signal is then compensated for by IC27 and its peripheral circuit, and transferred to the R.DEF board.

[1. Deflection Circuit]

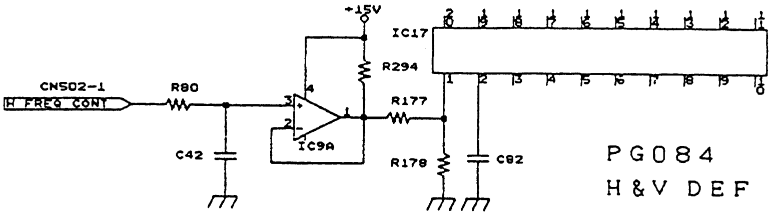
1-1 Horizontal circuit

① Horizontal oscillation circuit

Horizontal oscillation frequency is determined by a current that is applied to Pin No. 1 of IC17 through R178, C82, and R177.

This current is generated by the voltage of H.FREQ.CONT from the D/A converter, applied to IC17 through R80, IC9, and R177.

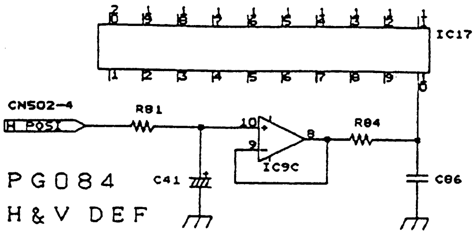
The H.FREQ.CONT voltage is linearly changed in compliance with the frequency of horizontal sync signal. (Fig. 1)


+15V
IC17
R294
CN502-1
H FREQ CONT
R80
R177
IC9A
C42
R178
C82
PG084
H & V DEF

H. DEF (Fig. 1)

② Horizontal position control circuit

To change the horizontal position, the H.POSI control voltage from the D/A converter is extended through R81, IC9, and R84, and it is then applied from Pin No.10 of IC17 to the phase comparator located inside the IC. (Fig. 2)


IC17
CN502-4
H POSI
R81
R84
IC9C
PG084
H & V DEF
C41
C86

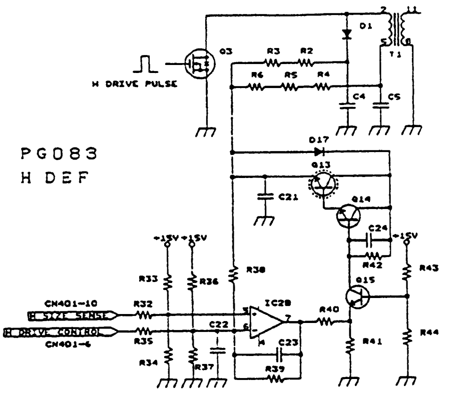
H. DEF (Fig. 2)

③ Horizontal drive circuit

This circuit is used for the optimization of driving conditions for the horizontal output transistor (Q4) by controlling the current that flows through drive resistors (R4, R5, R6).

According to the horizontal frequency, a voltage (H.DRIVE CONTROL) is applied to R35 and this optimizes the driving conditions by controlling the current carried in the drive resistors with the aid of Q13, Q14, and Q15.

According to variations in horizontal size, voltage (H.SIZE SENSE) applied to R32 also changes to optimize the driving conditions in the same manner. (Fig. 3))


Q3
R3
R2
R6
R5
R4
D1
T1
C4
C5
H DRIVE PULSE
PG083
H DEF
D17
Q13
C21
Q14
C24
+15V
R33
R36
R38
R42
R43
Q15
CN401-10
H SIZE SENSE
H DRIVE CONTROL
CN401-6
R32
R35
R34
R37
C22
IC28
R40
C23
R39
R41
R44

H. DEF (Fig. 3)

④ Horizontal linearity compensation circuit

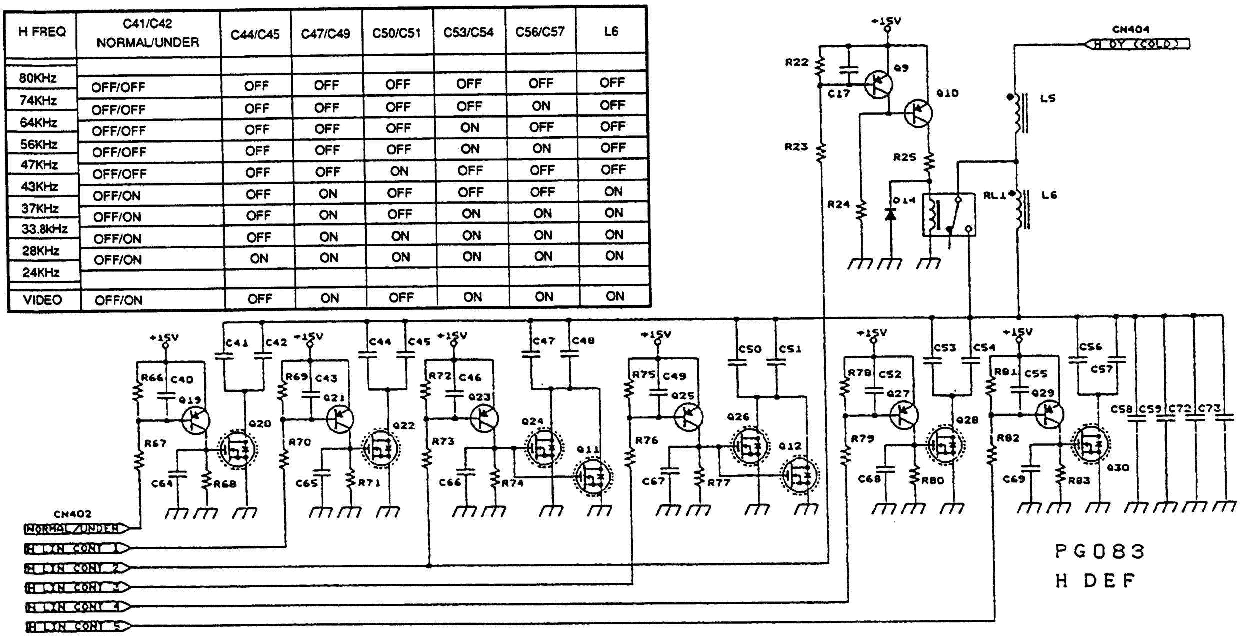
The Character-S compensation capacitors for horizontal linearity are changed over to the required horizontal frequency, SCAN SELECT, and input mode to obtain an optimal Character-S compensation result.

The changeover signal is H.LIN CONT 1~5 that is output from the CPU board. Capacitor changeover is effected by power MOS FET.

Based on the horizontal frequency, linearity coils are changed over by relays so that optimal compensation can be achieved.

Conditions of capacitors and coils in each mode are shown in the drawing. (Fig. 4)

H FREQ	C41/C42 NORMAL/UNDER	C44/C45	C47/C49	C50/C51	C53/C54	C56/C57	L6
80KHz	OFF/OFF	OFF	OFF	OFF	OFF	OFF	OFF
74KHz	OFF/OFF	OFF	OFF	OFF	OFF	ON	OFF
64KHz	OFF/OFF	OFF	OFF	OFF	ON	OFF	OFF
56KHz	OFF/OFF	OFF	OFF	OFF	ON	ON	OFF
47KHz	OFF/OFF	OFF	OFF	ON	OFF	OFF	OFF
43KHz	OFF/ON	OFF	ON	OFF	OFF	OFF	ON
37KHz	OFF/ON	OFF	ON	OFF	ON	ON	ON
33.8kHz	OFF/ON	OFF	ON	ON	ON	ON	ON
28KHz	OFF/ON	ON	ON	ON	ON	ON	ON
24KHz							
VIDEO	OFF/ON	OFF	ON	OFF	ON	ON	ON


+15V
CN404
H DY (COLD)
R22
C17
Q9
Q10
L5
R23
R25
R24
D14
RL1
L6
C41
C42
C44
C45
C47
C48
C50
C51
C53
C54
C56
C57
R66
C40
Q19
Q20
R67
C64
R68
R69
C43
Q21
Q22
R70
C65
R71
R72
C46
Q23
Q24
Q11
R73
C66
R74
R75
C49
Q25
Q26
Q12
R76
C67
R77
R78
C52
Q27
Q28
R79
C68
R80
R81
C55
Q29
Q30
R82
C69
R83
C58
C59
C72
C73
CN402
NORMAL/UNDER
H LIN CONT 1
H LIN CONT 2
H LIN CONT 3
H LIN CONT 4
H LIN CONT 5
PG083
H DEF

H. DEF (Fig. 4)

⑤ Horizontal amplitude control circuit

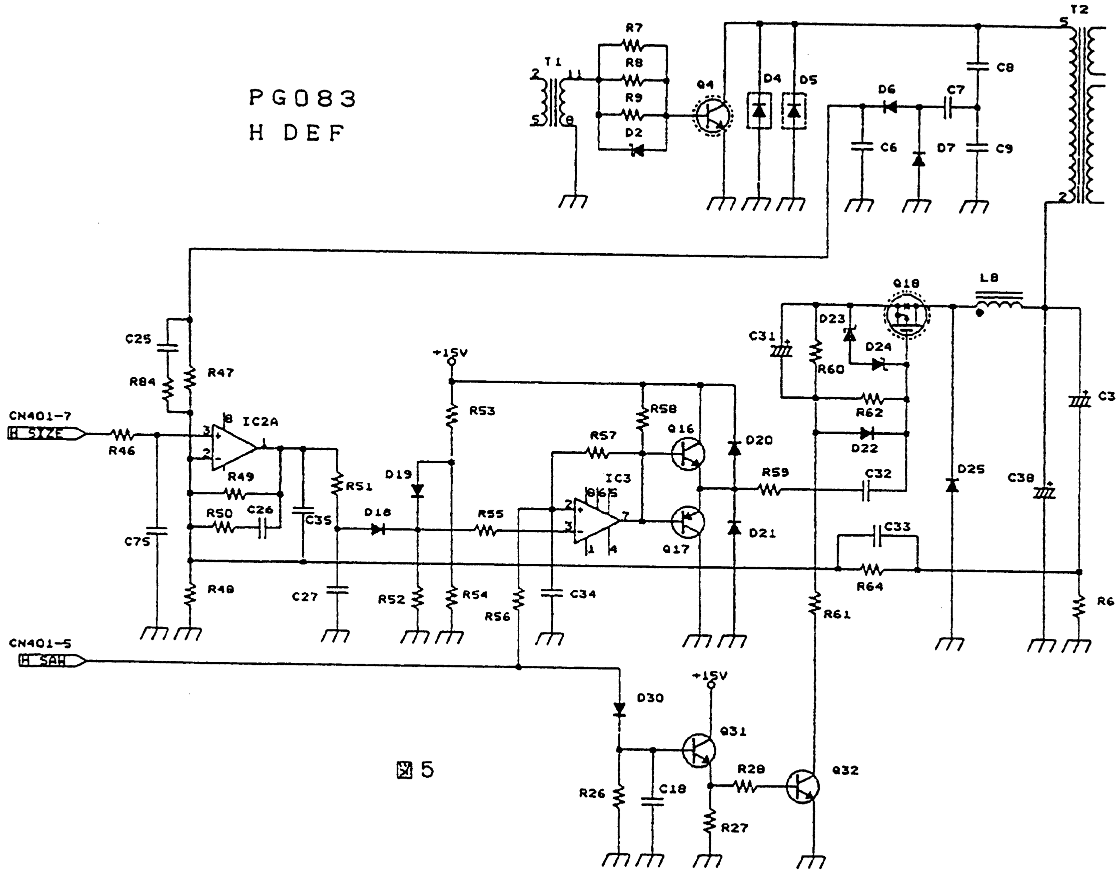
To obtain a constant crest value of horizontal output pulses whose voltage is divided by C8 and C9, the power supply of the horizontal output circuit is controlled. In this manner, horizontal amplitude is kept almost constant for all horizontal oscillation frequencies.

In addition, horizontal amplitude is made variable by the use of H.SIZE control voltage from the D/A converter.

Pulses, whose voltage is divided by C8 and C9, are clamped at D7. Since then, they are treated for peak rectification by D6 and C6. The resultant signal is compared with H.SIZE control voltage by IC2, and its error component is amplified.

For this output voltage, saw-tooth waves of horizontal oscillation are comparated by IC3, and the pulses, which are controlled by horizontal oscillation frequency and horizontal size, are generated at the gate of Q18. Using these pulses, Q18 operates to control the power source of the horizontal output circuit so that the crest value of horizontal output pulses can be kept constant. If H.SIZE control voltage changes at that time, horizontal amplitude is changed according to the voltage change.

The circuit consisting of Q31, Q32, D30, R26, R27, R28, and C18 functions to cut off Q18 when the supply of saw-tooth waves of horizontal oscillation is suspended for a certain reason. This is a circuit intended to protect Q4, Q18, etc. (Fig. 5)


PG083
H DEF
T1
R7
R8
R9
D2
Q4
D4
D5
D6
C7
C8
C6
D7
C9
T2
Q18
L8
D23
D24
C31
R60
R62
D22
C39
C25
R84
R47
+15V
CN401-7
H SIZE
R46
IC2A
R53
R58
Q16
R57
D20
R59
C32
D25
C38
R49
D19
R51
IC3
R50
C26
C35
D18
R55
Q17
D21
C33
C75
R48
C27
R52
R54
R56
C34
R64
R61
R65
CN401-5
H SAW
+15V
D30
Q31
R28
Q32
R26
C18
R27
図5

H. DEF (Fig. 5)

⑥ Side pin cushion compensation circuit

Parabolic waves are obtained by double integral from saw-tooth waves of vertical oscillation, generated at Pin No.⑬ of IC17. These parabolic waves are level-controlled at the AGC circuit consisting of IC10, IC11, etc. Parabolic waves, level-controlled with S.PIN control voltage from the D/A converter, are also used to modulate source voltage of the horizontal output circuit. Therefore, this is a circuit intended to compensate side pin cushion.

Saw-tooth waves of vertical oscillation generated at Pin No.⑬ of IC17 are arranged into parabolic waves through double integral by R147, R148, C71, and C72. These parabolic waves are then input in Pin No.④ of IC10.

The AGC circuit, consisting of IC10, IC11, etc., functions to maintain parabolic waves at a constant level even when vertical oscillation frequency changes. In addition, there is another circuit, consisting of IC11, IC12, etc., that performs optimal side pin cushion compensation when horizontal and vertical amplitudes are changed.

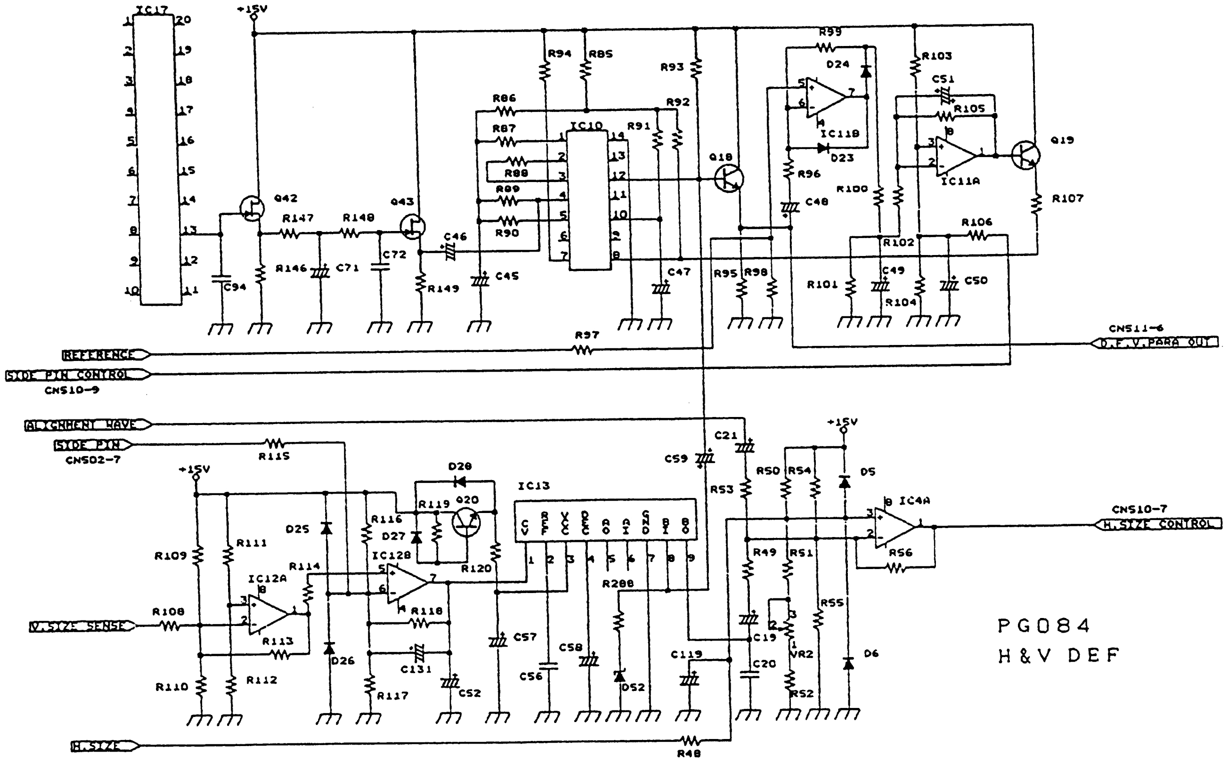
Variations in amplitude are detected by S.PIN CONT and V.SIZE SENSE voltages.

S.PIN control voltage from the D/A converter is used to control an attenuator of IC13 so that the amount of side pin cushion compensation can be regulated.

These parabolic waves are input in IC4 through C19 and R49.

Side pin cushion compensation is effected when H.SIZE control voltage from the D/A converter is modulated by these parabolic waves and then applied to the horizontal amplitude control circuit, and the source voltage of the horizontal output circuit is modulated.

In addition, an input of saw-tooth waves is entered in IC4 through C21 and R53, for trapezoidal distortion to be related later. (Fig. 6)


IC17
+15V
Q42
Q43
R147
R148
R146
C71
C72
C94
C46
C45
R149
R86
R87
R88
R89
R90
IC10
R91
R92
R93
R94
R85
C47
Q18
R97
R99
D24
IC11B
D23
R96
C48
R100
R95
R98
R101
R102
C49
R104
C50
R103
C51
R105
IC11A
R106
Q19
R107
REFERENCE
SIDE PIN CONTROL
CN510-9
CN511-6
D.F.V.PARA OUT
ALIGNMENT WAVE
SIDE PIN
CN502-7
R115
+15V
R109
R111
R114
IC12A
R108
V.SIZE SENSE
R113
R110
R112
D25
D26
D28
R119
Q20
R116
D27
IC12B
R120
R118
C131
R117
C52
IC13
R288
C57
C58
C56
D52
C119
C21
C59
R53
R50
R54
D5
IC4A
R49
R51
R56
C19
C20
VR2
R52
R55
D6
CN510-7
H.SIZE CONTROL
H.SIZE
R48
PG084
H&V DEF

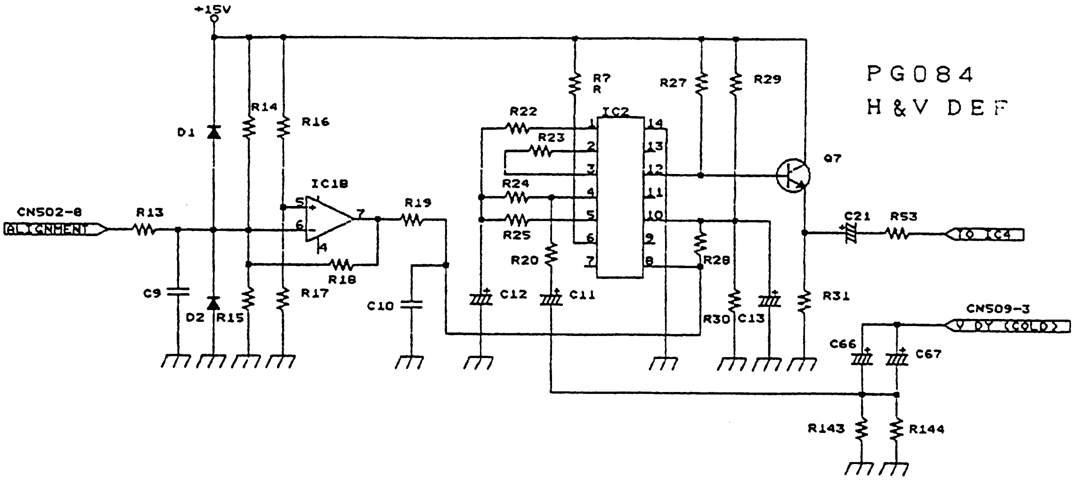
H. DEF (Fig. 6)

⑦ Trapezoidal distortion compensation circuit

Vertical saw-tooth waves generated at both ends of R143 are applied to Pin No.④ of IC2 through C11 and R20. ALIGNMENT control voltage from the D/A converter is amplified by IC1 and applied to Pin No.⑧ of IC2.

By adjusting this control voltage, a bias component is changed at Pin No.⑧ of IC2 to control the level of saw-tooth waves for trapezoidal distortion compensation.

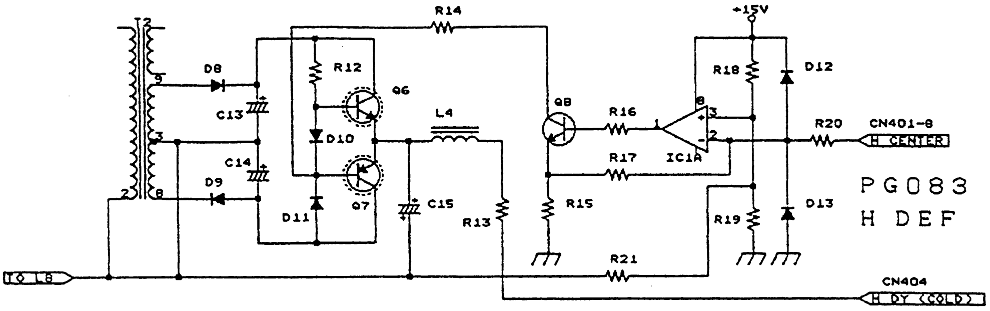
These saw-tooth waves are fed from Pin No.⑫ of IC2 to C21 through Q7. Similarly as for the previous-described side pin cushion compensation circuit, the source voltage of the horizontal output circuit is modulated for trapezoidal distortion compensation. (Fig. 7)


+15V
PG084
H & V DEF
CN502-8
ALIGNMENT
R13
C9
D1
D2
R14
R15
R16
R17
IC1B
R18
R19
C10
R22
R23
R24
R25
R20
C12
C11
R7
IC2
R27
R29
R28
R30
C13
Q7
R31
C21
R53
TO IC4
CN509-3
V DY (COLD)
C66
C67
R143
R144

H. DEF (Fig. 7)

⑧ Horizontal position control circuit

H.CENTER control voltage from the D/A converter is amplified by IC1 and Q8 and emitter voltages of Q6 and Q7 are controlled. In this fashion, this circuit adjusts the horizontal position by applying a DC current to the horizontal winding through L4 and R13. (Fig. 8)


T2
D8
C13
C14
D9
R12
Q6
D10
Q7
D11
R14
L4
C15
R13
Q8
R15
R16
R17
IC1A
R21
+15V
R18
D12
R19
D13
R20
CN401-8
H CENTER
PG083
H DEF
TO LB
CN404
H DY (COLD)

H. DEF (Fig. 8)

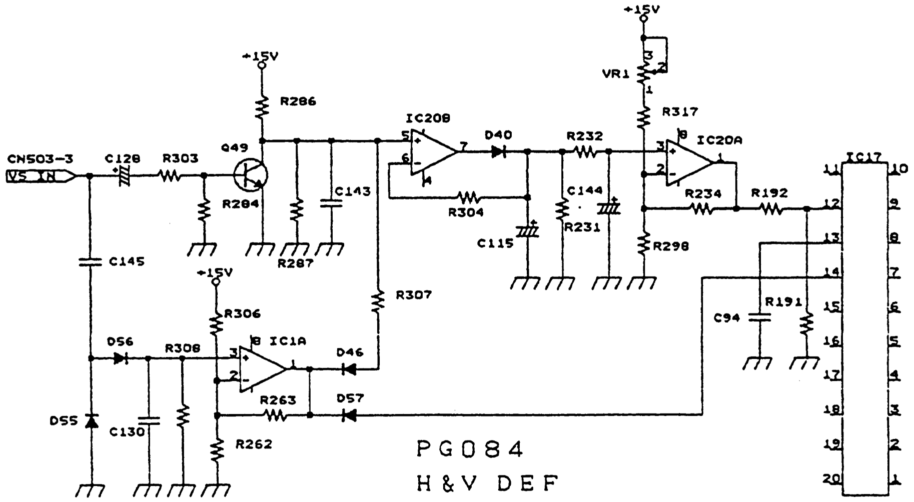
1-2 Vertical Circuit

① Vertical oscillation circuit (Fig. 9)

Vertical oscillation frequency is determined by a current applied to Pin No.12 of IC17 through R191, C94, and R192.

This current is supplied to IC17 through R192 after that the vertical sync signal applied to Pin No.③ of CN503 has been converted into a voltage by a frequency-voltage (F-V) converter circuit consisting of Q49, IC20, D40, etc., and then amplified at IC20.

The circuit consisting of D46, D55, D56, D57, IC1, etc., is used to detect the presence of vertical sync signal and fix the vertical oscillation frequency in free-run mode (sync not entered) to about 80Hz.

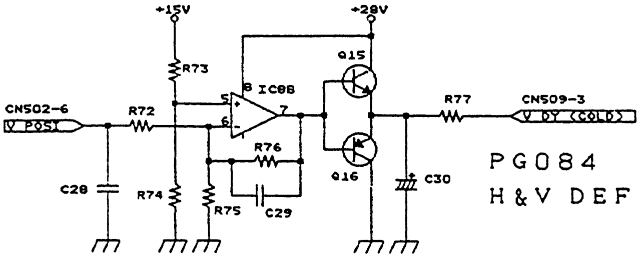

+15V
R286
Q49
CN503-3
VS IN
C128
R303
R284
R287
C143
C145
+15V
R306
R307
IC20B
5
6
7
4
D40
R304
C115
R232
C144
R231
+15V
VR1
3
2
1
R317
8
IC20A
3
2
1
R234
R192
R298
D56
R308
8
IC1A
3
2
1
D46
R263
D57
D55
C130
R262
C94
R191
IC17
11
12
13
14
15
16
17
18
19
20
10
9
8
7
6
5
4
3
2
1
PG084
H&V DEF

H & V DEF (Fig. 9)

② Vertical position control circuit (Fig. 10)

V.POSI control voltage from the D/A converter is amplified by IC8, and applied to bases of Q15 and Q16. Then a DC current is fed to the vertical winding of DY through R77 to control the vertical position.

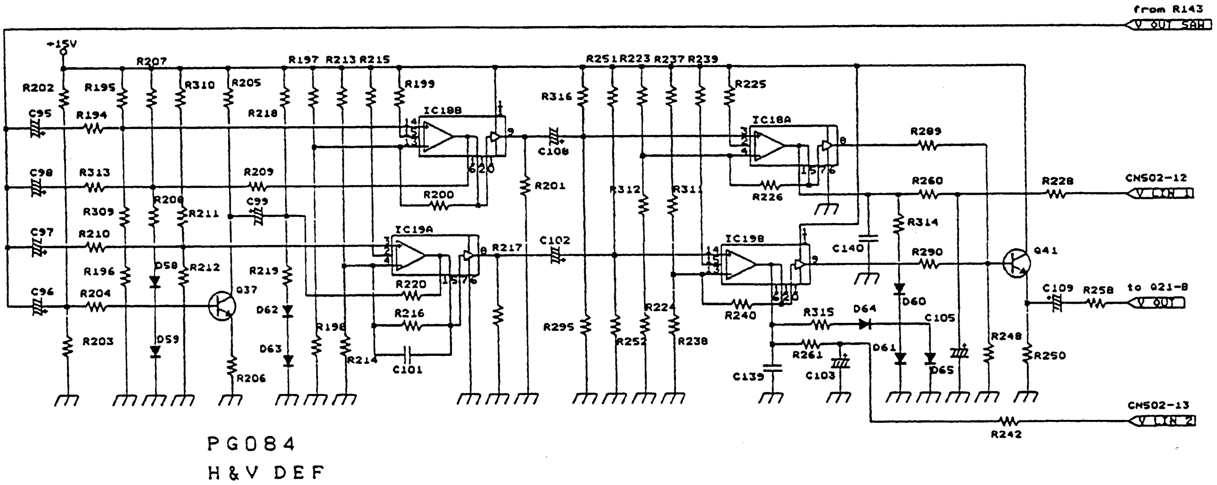
When V.POSI control voltage is changed, emitter voltages of Q15 and Q16 are changed, which operation moves the vertical position upwards and downwards.


+15V
+28V
R73
Q15
8
IC8B
5
6
7
CN502-6
V POSI
R72
R76
R77
CN509-3
V DY (COLD)
Q16
C30
C28
R74
R75
C29
PG084
H&V DEF

H & V DEF (Fig. 10)

③ Vertical linearity compensation circuit (Fig. 11)

Compensation waveforms are produced from vertical saw-tooth waves generated at both ends of R143. Using these waveforms, the upper part of screen is made by IC18 and the lower part is made by IC19. The signal level is regulated with control voltages of V.LIN 1,2 from the D/A converter. The compensation waveforms mixed up at Q41 are used for vertical linearity compensation.


from R143
V OUT SAW
+15V
R207
R197 R213 R215
R251 R223 R237 R239
R202
R195
R310
R205
R199
R316
R225
C95
R194
R218
IC18B
IC18A
C108
R289
C98
R313
R209
R201
R312
R311
R260
R228
CN502-12
V LIN 1
R309
R208
R211
C99
R200
R226
R314
C97
R210
IC19A
R217
C102
IC19B
C140
R290
Q41
R196
D58
R212
R219
R220
C109
R258
to Q21-8
V OUT
C96
R204
Q37
D62
R216
R224
R240
R315
D64
D60
C105
R203
D59
R198
R295
R252
R238
R248
D63
R214
C101
R261
D61
R250
R206
C139
C103
D65
CN502-13
V LIN 2
R242
PG084
H&V DEF

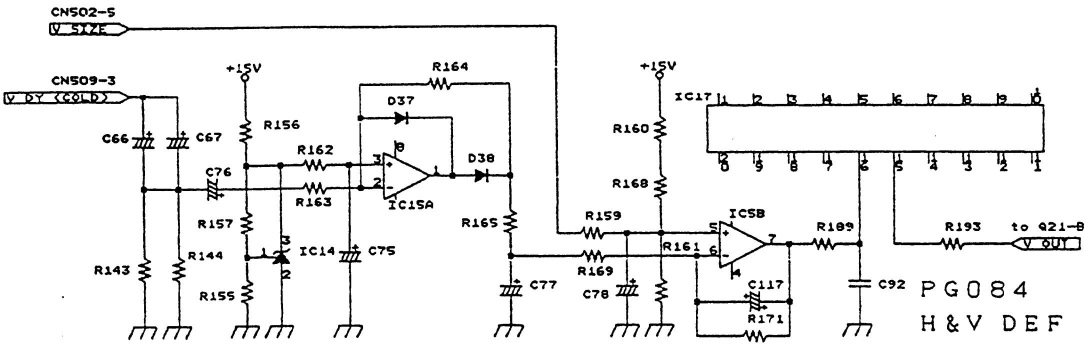
H & V DEF (Fig. 11)

④ Vertical amplitude control circuit (Fig. 12)

By control to obtain a constant level of vertical saw-tooth waves generated at both ends of R143, the vertical amplitude is kept almost constant for all vertical oscillation frequencies. In addition, this circuit regulates the vertical amplitude by the use of V.SIZE control voltage from the D/A converter.

The voltage, obtained through full-wave rectification of vertical saw-tooth waves, is compared with V.SIZE control voltage by IC5. The resultant error component is amplified and applied to Pin No.16 of IC17.

By changing V.SIZE control voltage, a DC voltage applied to Pin No.16 is changed to control the amplifier gain inside the IC. Thus, the level of saw-tooth waves in vertical output generated at Pin No.15 is also changed.


CN502-5
V SIZE
CN509-3
V DY (COLD)
+15V
R164
+15V
IC17
D37
R156
C66
C67
R162
D38
R160
C76
R163
IC5A
R168
R157
R165
R159
IC5B
R189
R193
to Q21-8
V OUT
R144
IC14
C75
R161
R143
R169
R155
C77
C78
C117
C92
R171
PG084
H&V DEF

H & V DEF (Fig. 12)

[2. High-voltage circuit]

① HV output circuit (Fig. 13)

Since a power MOS FET is employed for a high-voltage output device, stable performance is assured throughout the range of horizontal frequencies.

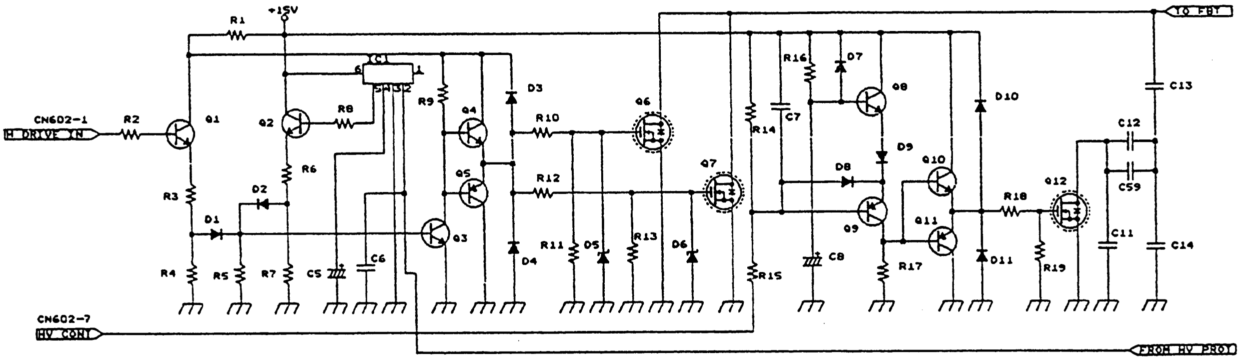
Resonance capacitors are changed over by horizontal frequencies and the fly-back period is regulated to obtain optimal HV regulation.

The drive pulses pass through Q1, Q3, Q4, and Q5, and arrive at the power MOS FET of output.

Resonance pulses are generated by the FBT and the resonance capacitors C11, C12, C13, C14, and C59.

The resonance pulse voltage is stepped up at the FBT to generate a high voltage necessary for CRT driving.

The circuit consisting of IC2, Q2, etc., is a protector circuit that functions to shut down a high voltage when it is found to be unusually high.



PG085
HV & FOCUS

H & V DEF (Fig. 13)

② HV control (stabilizer) circuit (Fig. 14)

This circuit involves Circuit 1 that maintains a constant high voltage for all horizontal oscillation frequencies, and Circuit 2 that maintains a constant high voltage against load fluctuations.

Circuit 1 is a circuit intended to control a source voltage in the HV circuit so that a voltage obtained through rectification of pulses from FBT secondary can be kept constant. Circuit 2 is a circuit intended to maintain a high voltage at a constant level, through detection of variations in high voltage and compensation of a differential component from the auxiliary transformer.

1) Pulses generated at Pin No.④ of the FBT are rectified and compared with the reference voltage at IC5. The resultant error component is then amplified.

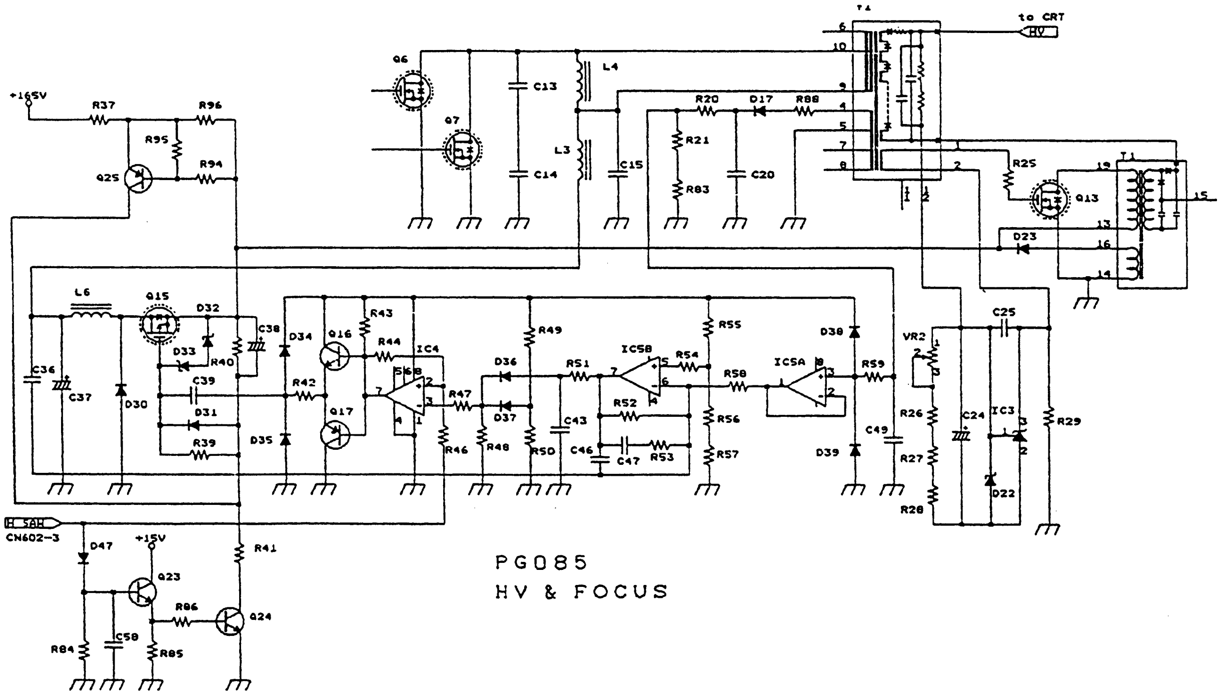
   To obtain this output voltage, saw-tooth waves of horizontal oscillation are comparated at IC4 and the pulses controlled by a horizontal oscillation frequency are generated at the gate of Q15.

   Q15 is driven by these pulses and the power source of HV output circuit is controlled to maintain a constant crest value of high-voltage output pulses.

   The circuit, consisting of Q23, Q24, D47, R84, R86, and CC58, is a circuit intended to protect Q6, Q7, Q18, etc., by cutting off Q15 when the supply of horizontal oscillation saw-tooth waves is suspended for a certain reason.

2) According to a change in voltage divided by high-voltage detection resistors in the FBT as well as VR2, R26, R27, and R28, a bias component of pulses generated from Pin No.① of the FBT is changed. At the same time, the pulse width is controlled at Q13 and the drain voltage of Q13 is changed according to load fluctuations.

   By this voltage, a voltage is generated on the secondary side of the auxiliary transformer to maintain a high voltage at a constant level.


+165V
R37
R96
R95
R94
Q25
Q6
Q7
C13
C14
L4
L3
C15
R20
D17
R88
R21
R83
C20
T4
to CRT
HV
R25
Q13
T1
D23
L6
Q15
D32
D33
R40
C38
C39
D31
R39
C36
C37
D30
D34
Q16
R43
R44
IC4
R42
Q17
D35
R47
R46
R48
R49
D36
R51
IC5B
R54
R52
D37
C43
R50
C46
C47
R53
R55
R58
R56
R57
IC5A
D38
D39
R59
VR2
C25
R26
C24
IC3
R29
C49
R27
R28
D22
H SAW
CN602-3
D47
+15V
Q23
R86
Q24
R41
C58
R84
R85
PG085
HV & FOCUS

H & V DEF (Fig. 14)

[3. Focus circuit]

① Dynamic focus circuit (Fig. 15)

This circuit is used to produce horizontal and vertical parabolic waveforms, and to send them to the output circuit after mixture.

Adopting the HP as a trigger and using a constant-current source of Q3 and functions of charge and discharge by C5, horizontal saw-tooth waves are produced and Q3 is controlled so that their level is always maintained at a constant level at any horizontal oscillation frequency.

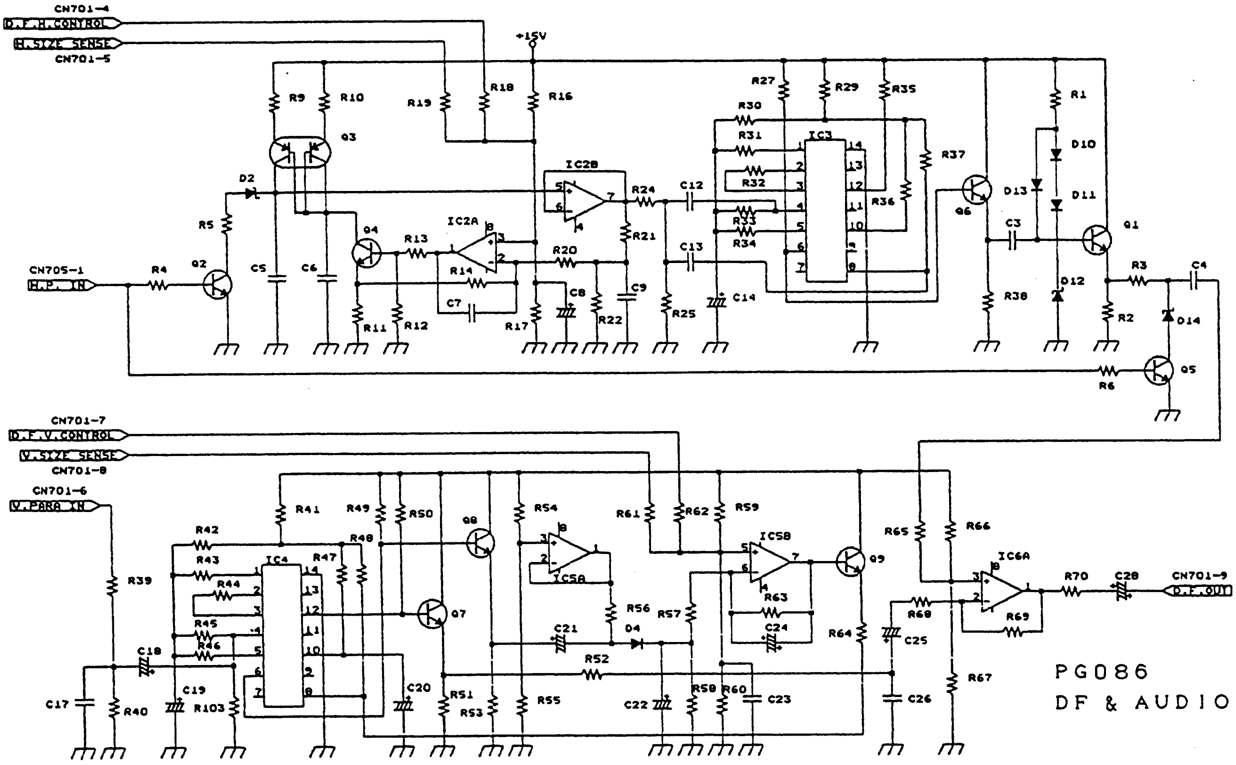
In addition, these saw-tooth waves are multiplied at IC3 to obtain parabolic waveforms.

The above-mentioned level can be regulated by D.F.H. control voltage from the D/A converter. In addition, waveforms are adjusted to an adequate level according to the horizontal size (with voltage of H.SIZE SENSE).

For verticality, vertical parabolic waveforms produced in the side pin compensation circuit are controlled by the AGC circuit consisting of IC4, IC5, Q7, Q8, Q9, etc., so that their level can be kept constant for all vertical oscillation frequencies.

This level can be regulated by D.F.V. control voltage from the D/A converter and waveforms are regulated to an adequate level according to the vertical size (with voltage of V.SIZE SENSE).

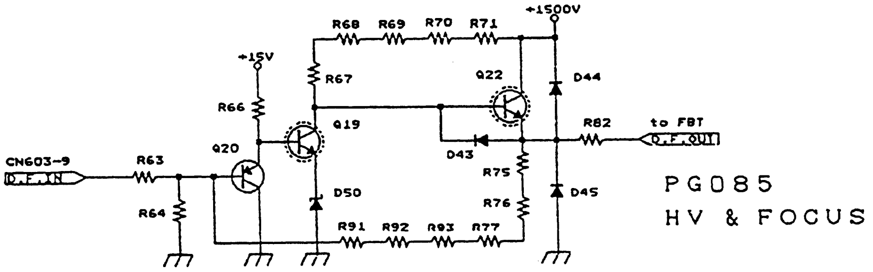
These horizontal and vertical parabolic waves are mixed up at IC6 and then transferred to the output circuit.


CN701-4
D.F.H.CONTROL
H.SIZE SENSE
CN701-5
+15V
CN705-1
H.P. IN
CN701-7
D.F.V.CONTROL
V.SIZE SENSE
CN701-8
CN701-6
V.PARA IN
CN701-9
D.F.OUT
IC2B
IC2A
IC3
IC4
IC5A
IC5B
IC6A
PG086
DF & AUDIO

H & V DEF (Fig. 15)

② Focus output circuit (Fig. 16)

Parabolic waveforms from the dynamic focus circuit are amplified to the required level by the amplifier circuit consisting of Q19, Q20, etc. The resultant signal is transmitted by the sender circuit consisting of Q22, etc., and fed to the focus electrode of CRT via the FBT.


+1500V
+15V
R68
R69
R70
R71
R67
Q22
D44
R66
Q19
R82
to FBT
D.F.OUT
Q20
D43
CN603-9
D.F.IN
R63
R75
D50
R76
D45
R64
R91
R92
R93
R77
PG085
HV & FOCUS

H & V DEF (Fig. 16)

Power Circuit

• Configuration

Since the power supply of this unit is designed to generate high power, a switching regulator system is adopted and the power supply circuit is compactly arranged into a unit with a metallic case, which is mounted on the chassis bottom.

Connections from this power unit to each circuit are made quite functionally through respective multi-connectors.

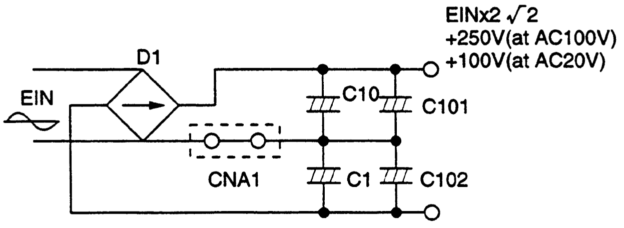
• Descriptions of each operation

1. AC input circuit

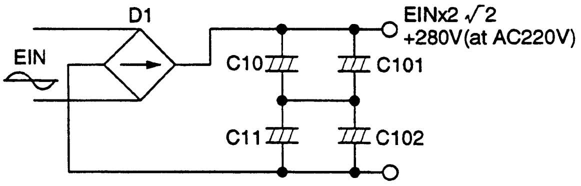
AC power is fed from J1 (inlet with line filters) on the rear panel of the main body, and conduction noise is sufficiently suppressed (by line filters L1 ~ L5). This power is then fed to the rectifier bridge diode of D1. By changing the CNA1 connector, the AC input voltage is changeable to AC100V (AC85V ~ 132V) or to AC200V (AC170V ~ 264V). In this case, however, line filters L1/L3 and fuse F1 must be carefully used since the current capacity is widely changeable.

AC input voltage	L1~L2	F1
AC85V~132V	DL-663	8A/125V
AC170V~264V	HS-8	5A/250V

For the AC100V (AC85V ~ 132V) specification, D1 is used for rectification at the supply voltage. For the AC200V (AC170V ~ 264V) specification, however, D1 is switched over to a full-wave rectification circuit through the above-mentioned connector, as shown in the diagram below.

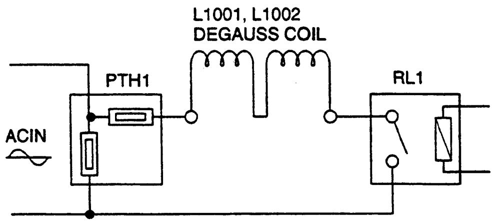


For AC100V specfication:
Rectification at supply voltage

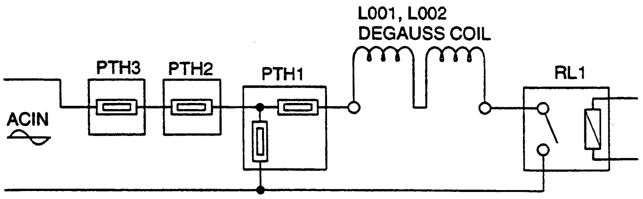


For AC200V specfication:
Full-wave rectification

At the same time, the degauss circuit is also switched over as shown below. In this manner, each time the AC power supply is turned on, or whenever manual operation is performed, a control signal is fed from CPU and an attenuation oscillatory current (positive-characteristic thermistors of LPTH1~3) of about 27Ap-p (1Ap-p/400msec) is automatically applied to the degauss coils of L001 and L002 for 5 seconds. Thus the magnetized shadow mask of CRT is degaussed and the purity grade can be retained.



For AC100V specification



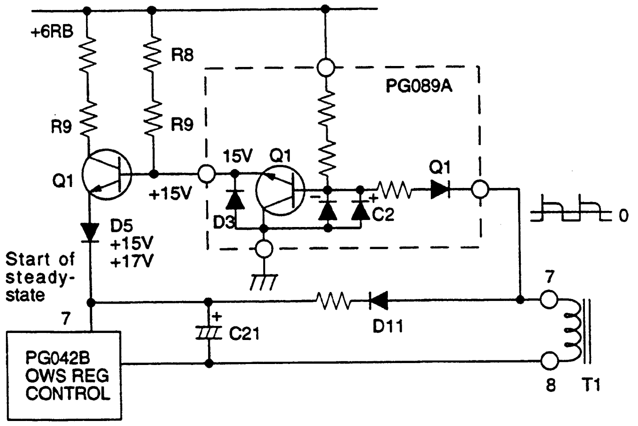
For AC200V specification

2. Inrush current protective circuit/ switching driver circuit

To avoid adverse effect of inrush current from large electrolytic capacitors (C10, C11, C101, C102) after rectification by D1, the power supply is used through a resistor R1 (15Ω) when actuating the switching circuit. Since then, Resistor R1 is short-circuited through Thyristor D6 and steady-state operation is effected thereafter.

Q2 is already in operation so that Thyristor D6 can be turned on at zero-cross time.

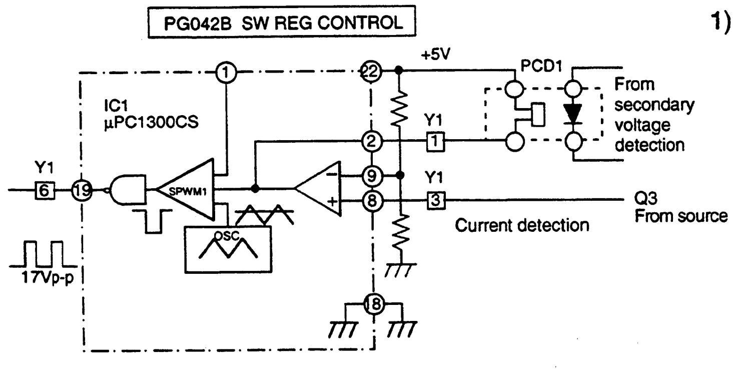
- **Protection of driver circuit/ latch-down driver circuit**



At the rising time of the switching circuit, Q1 base voltage of +15V is applied to the PG042B SW REG control circuit through D5. After SW oscillation has been started up, terminal voltage of C21 is maintained at +17V by the rectified voltage (D11) of pulses from the T1 winding. During steady-state operation, D5 is cut off. Q1 of PG089A is used as a protective circuit to prevent heat generation during latch-down in the Q1 circuit.

3. Main switching circuit (2 systems of Q3, T1/Q4, Q5, T2)

In IC1 of the PG042B SW REG control circuit, SW OSC begins to oscillate at fo≈55kHz and output (by PWM 5W system) is generated while each pulse width is modulated. A single IC is used to control two SW circuits. For this reason, no problem like beat noise or ringing can occur in the SW circuit.



1) Basic performance of PWM (pulse width modulation)

As shown in the diagram at the left, a PCD1 photo-coupler is used so that voltage regulation on secondary side is entered from RIN ② of IC1, and is compared with triangular oscillatory waveform (55kHz) at the CA block. Since the threshold potential is varied, the PWM1 output circuit generates PWM pulses, which are in inverse proportion to voltage regulation in PCD1.

Similarly, modification is effected to reduce the pulse width of PWM1 output when the detected source voltage of Q3 switching power MOS FET becomes higher than the fixed bias at IC1 Pin No.③ (overcurrent), and the current limiter functions as a result.

Accordingly, when the burden of secondary output becomes small and voltage changes to a higher level, the overall loop functions so that the pulse width from IC1 output Pin No.⑲ is narrowed and the output pulse width from Q3 and T1 in the main switching circuit is also narrowed to lower the secondary output voltage. In this manner, voltage stabilization is effected. The control circuit of dual systems uses triangular-wave oscillation in common, and both systems maintain absolutely the same operation.

2) Overvoltage latch protective function

If overvoltage is generated due to maloperation in the secondary control output circuit of +165V and each 3-terminal REG input circuit of +15V, the shunt regulator of IC9 functions to be turned on to raise voltage above +2.4V ± 0.4V at the PG042B Y1$\boxed{13}$ → IC1 $\boxed{12}$ terminal through the PCD2 photo-coupler. Thus the overvoltage latch protective circuit functions to stop all output pulses. When the latch protective circuit functions and reset is required, the AC power cable may be pulled out. After the lapse of more than 2 minutes (latch recovery), the AC power supply may be turned on again.

The overvoltage latch protective circuit functions at the following voltages:

+B2 (+165V output) → 182V ± 9V (173V ~ 191V)
C37 terminal voltage +17V → 19V or above

3) Overcurrent latch protective function

An overcurrent latch protective circuit is adopted for protection against overloading in the high-power load consisting of Q4, Q5, and T2.

With this circuit, source currents of Q4 and Q5 are detected and fed to PG042B Y1 $\boxed{12}$ → IC1 Pin ㉔, and latch-up is effected at the detection voltage of ±0.2V/±20mV to stop all output pulses. When resetting from a latch-up state, the AC power cable may be pulled out in the same manner as for overvoltage latch-down, and after the lapse of more than 2 minutes the AC power supply may be turned on again.

The overcurrent latch protective circuit functions at the following currents:

Steady-state	Overload latch current
For +165V/1.5A (MAX) For +165V/1A (NORMAL) HV-H DEF For +180V/0.25A (MAX) VIDEO OUT For +28V/0.4A (MAX) DEF For +24V/0.63A (MAX) FAN	+165V/2A (at AC 100V) 2.3A (at AC 100V)

4. Power management control

As shown in the table below, remote ON/OFF control of each 3-terminal REG is effected with a control signal of the CPU (CN807), and ON/OFF control of each output voltage is also effected with ON/OFF switch operation on the high-power output side through PCD4.

MODE	TRUTH	TABLE	OUTPUT
	PMC 1	PMC 2	
POWER OFF	L	L	+85A, +87A
SUSPEND	L	H	+85A, +87A +B6 (Heater 6.3V → Preheat 5V)
STANDBY	H	H	Total output
ON MODE	H	H	Total output

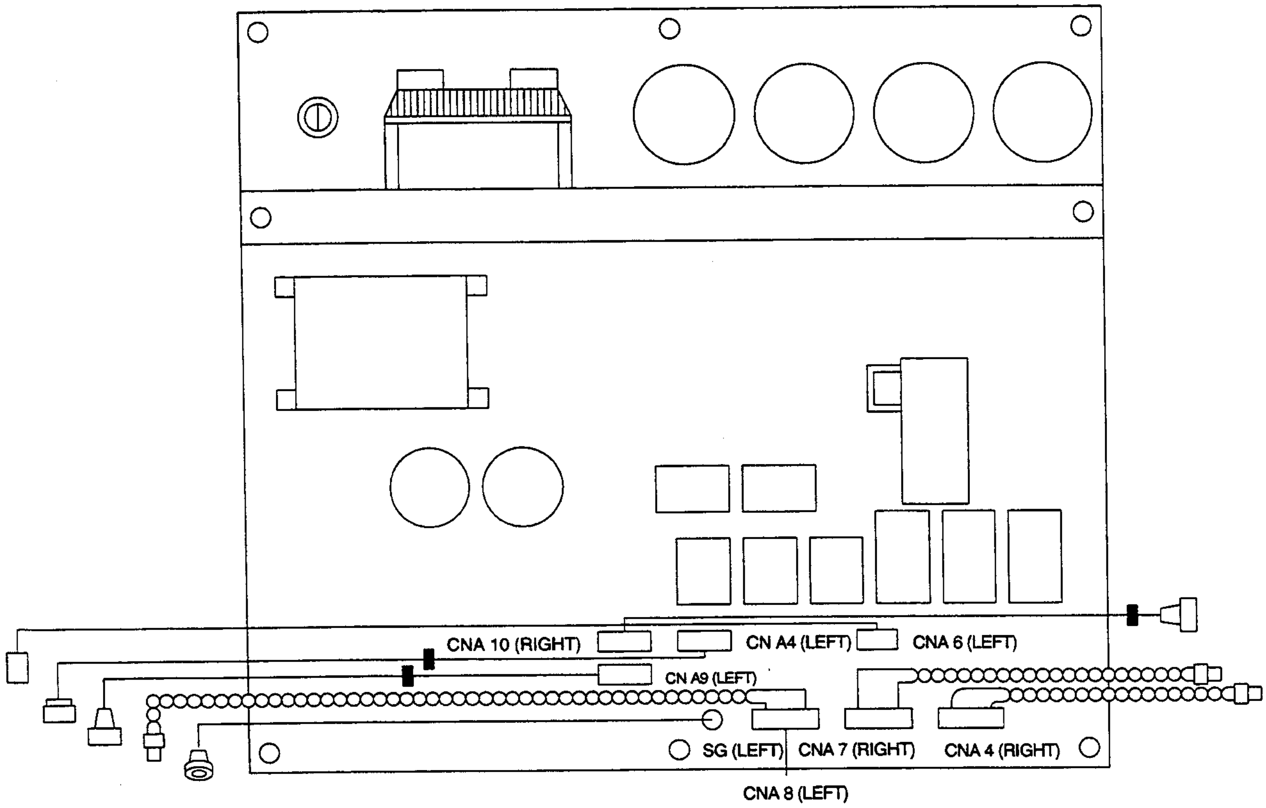
ASSEMBLING METHOD

SW REG PWB ASSY (PG031B) Wiring Materials Assortment

Working procedures

1. Divide wiring materials to the right and left, as illustrated.

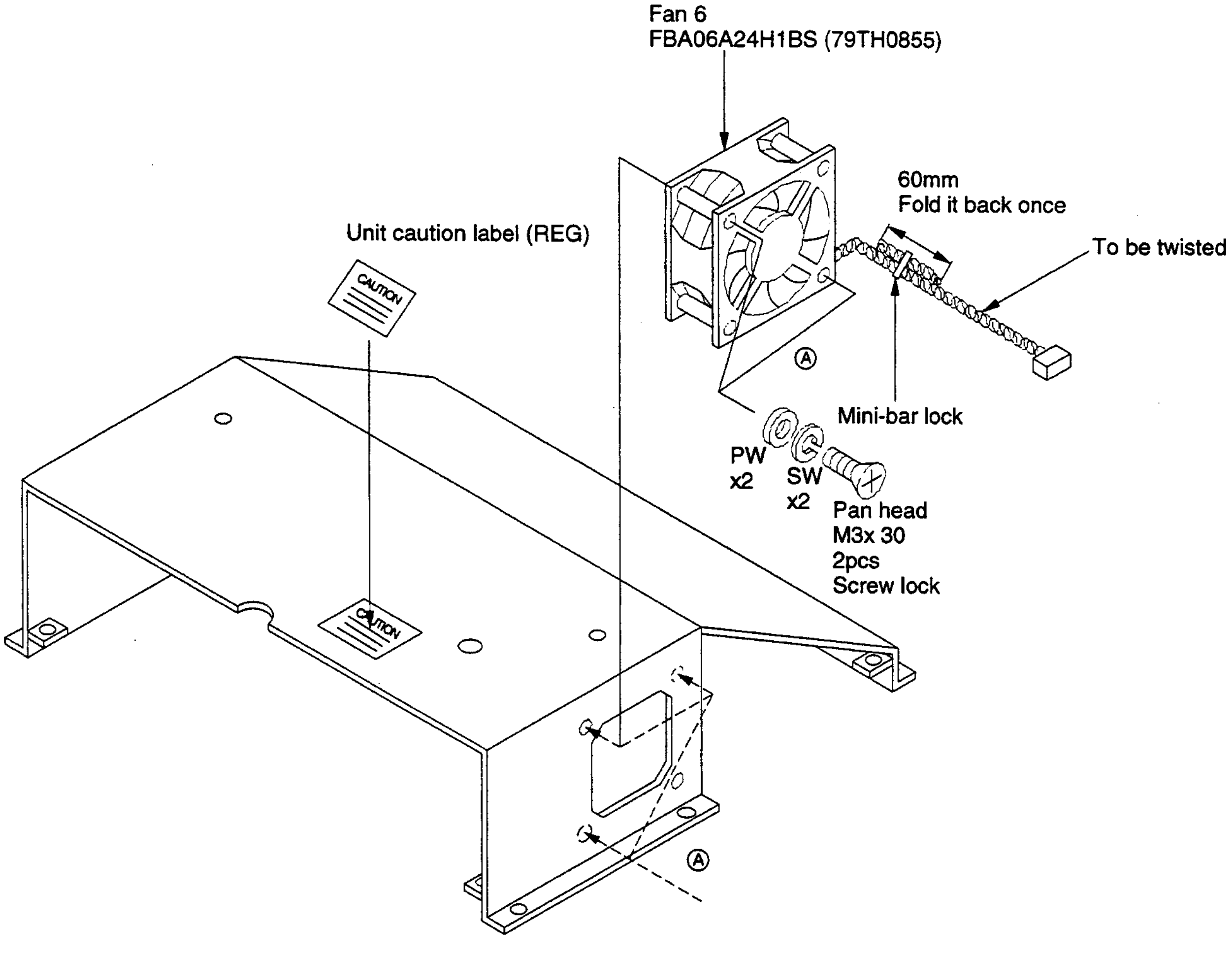
   Caution:
   - Wiring materials should be kept pressed to a lower position.
   - Do not confuse lead-out directions of wiring materials.
2. Stick the rating label to the fuse holder.



Make arrangements as illustrated.
The indications of RIGHT and LEFT denote wire lead-out directions.
▮ : Mini-bar lock

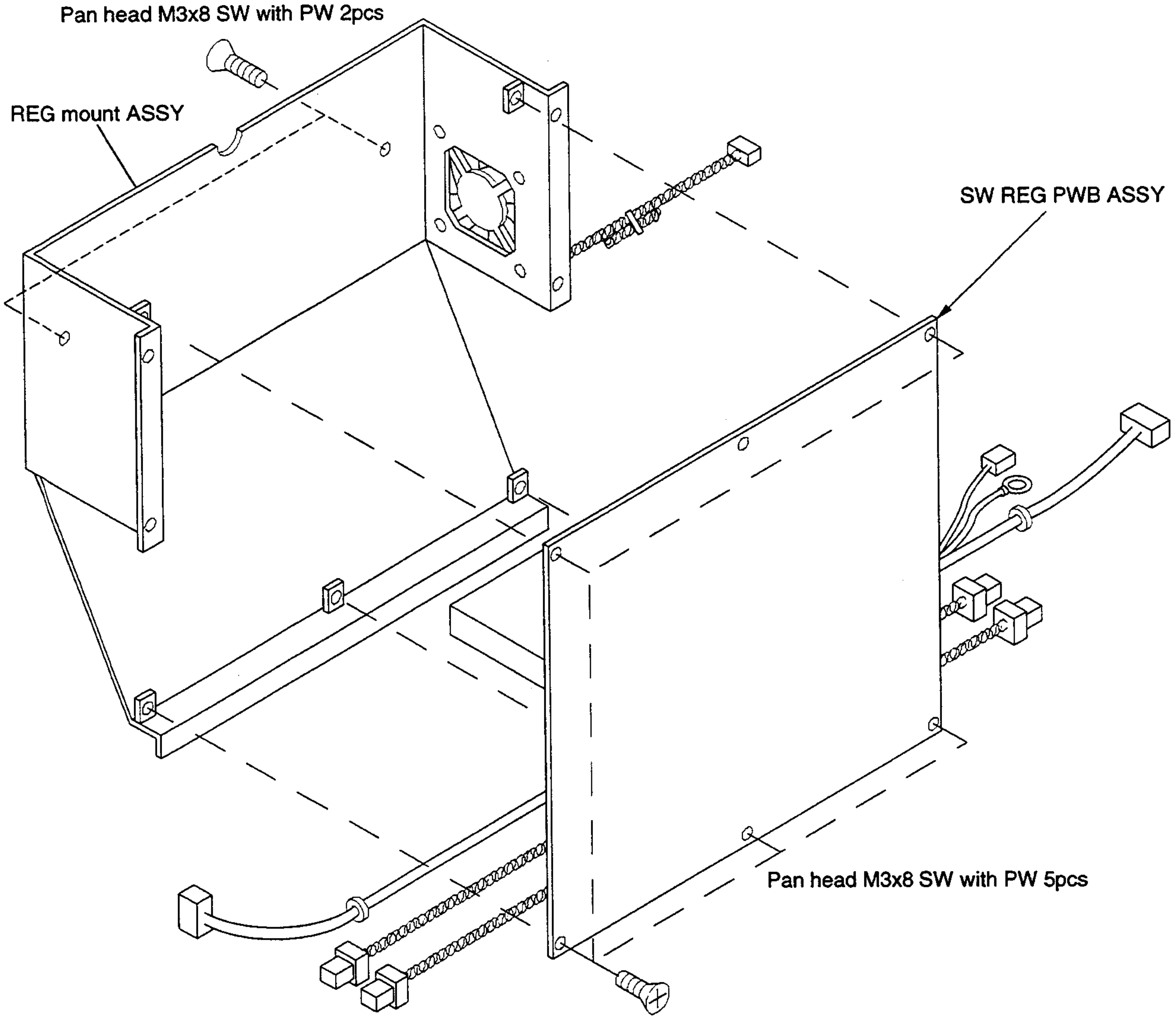
CNA 10 (RIGHT)
CN A4 (LEFT)
CNA 6 (LEFT)
CN A9 (LEFT)
SG (LEFT)
CNA 7 (RIGHT)
CNA 4 (RIGHT)
CNA 8 (LEFT)

1. Mounting should be done after the fan has been processed.
2. Adhere the unit caution label (REG).


Fan 6
FBA06A24H1BS (79TH0855)
60mm
Fold it back once
To be twisted
Unit caution label (REG)
CAUTION
Ⓐ
Mini-bar lock
PW
x2
SW
x2
Pan head
M3x 30
2pcs
Screw lock
CAUTION
Ⓐ

ASSEMBLING METHOD

RGB Unit Assembly


Pan head M3x8 SW with PW 2pcs
REG mount ASSY
SW REG PWB ASSY
Pan head M3x8 SW with PW 5pcs

Inlet processing and mounting

Working procedures

1. Solder WH46 to the earth terminal of the inlet.

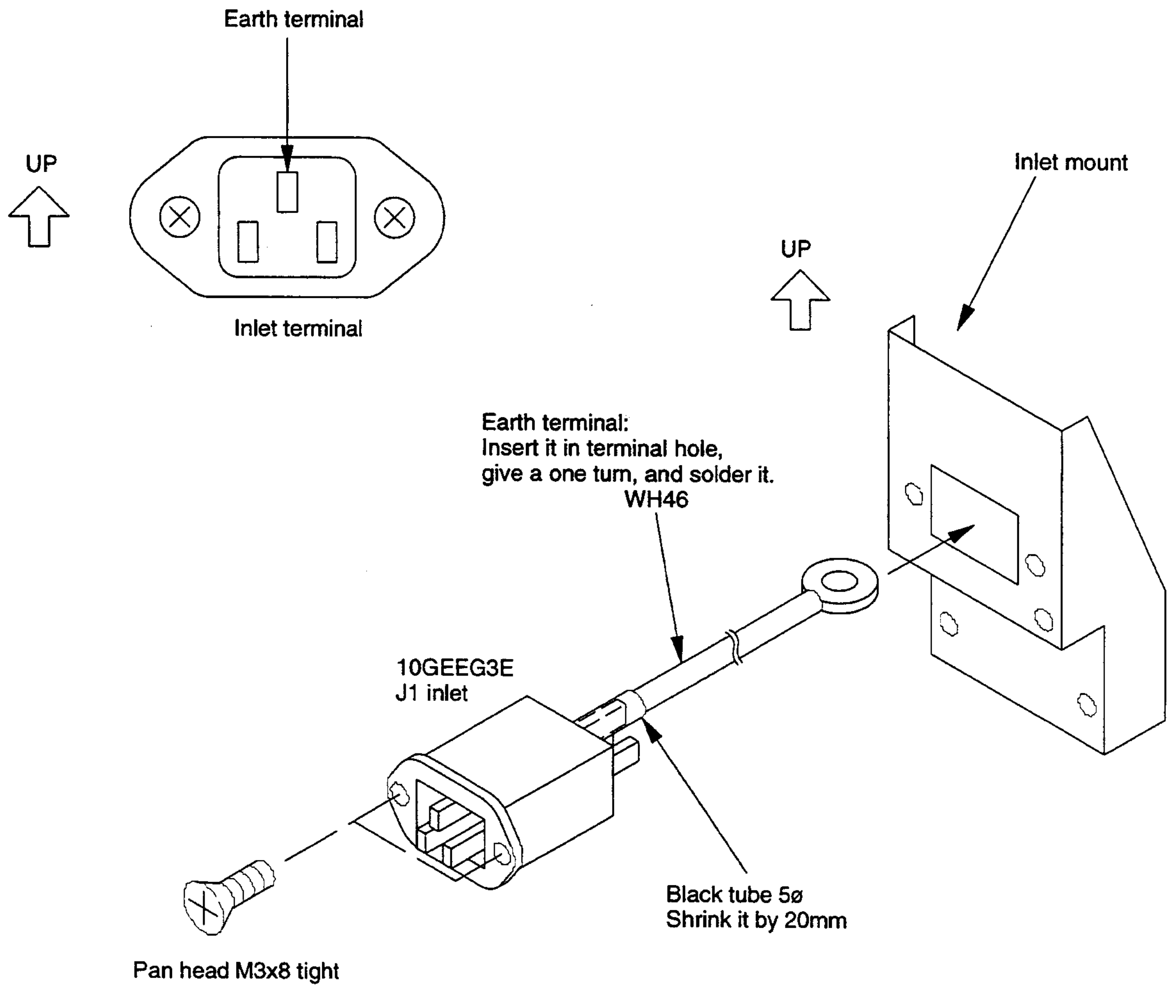
   Caution:

   - Provide a one turn to the earth terminal and solder it. Attach a tube and left it shrink.

2. Attach an earth terminal to the inlet mount and fasten it with screws. In this case, the earth terminal must be positioned upwards.

   Caution:

   - Never confuse upper and lower positions.


Earth terminal
UP
Inlet terminal
Inlet mount
UP
Earth terminal:
Insert it in terminal hole,
give a one turn, and solder it.
WH46
10GEEG3E
J1 inlet
Black tube 5ø
Shrink it by 20mm
Pan head M3x8 tight

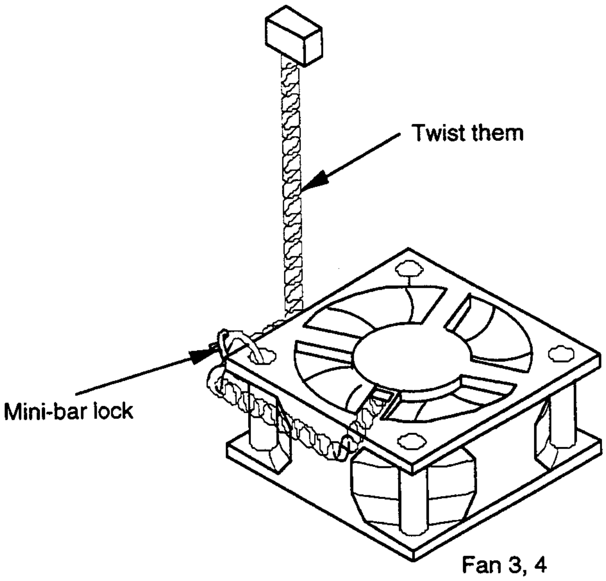
Fan 3, 4 processing

Working procedures

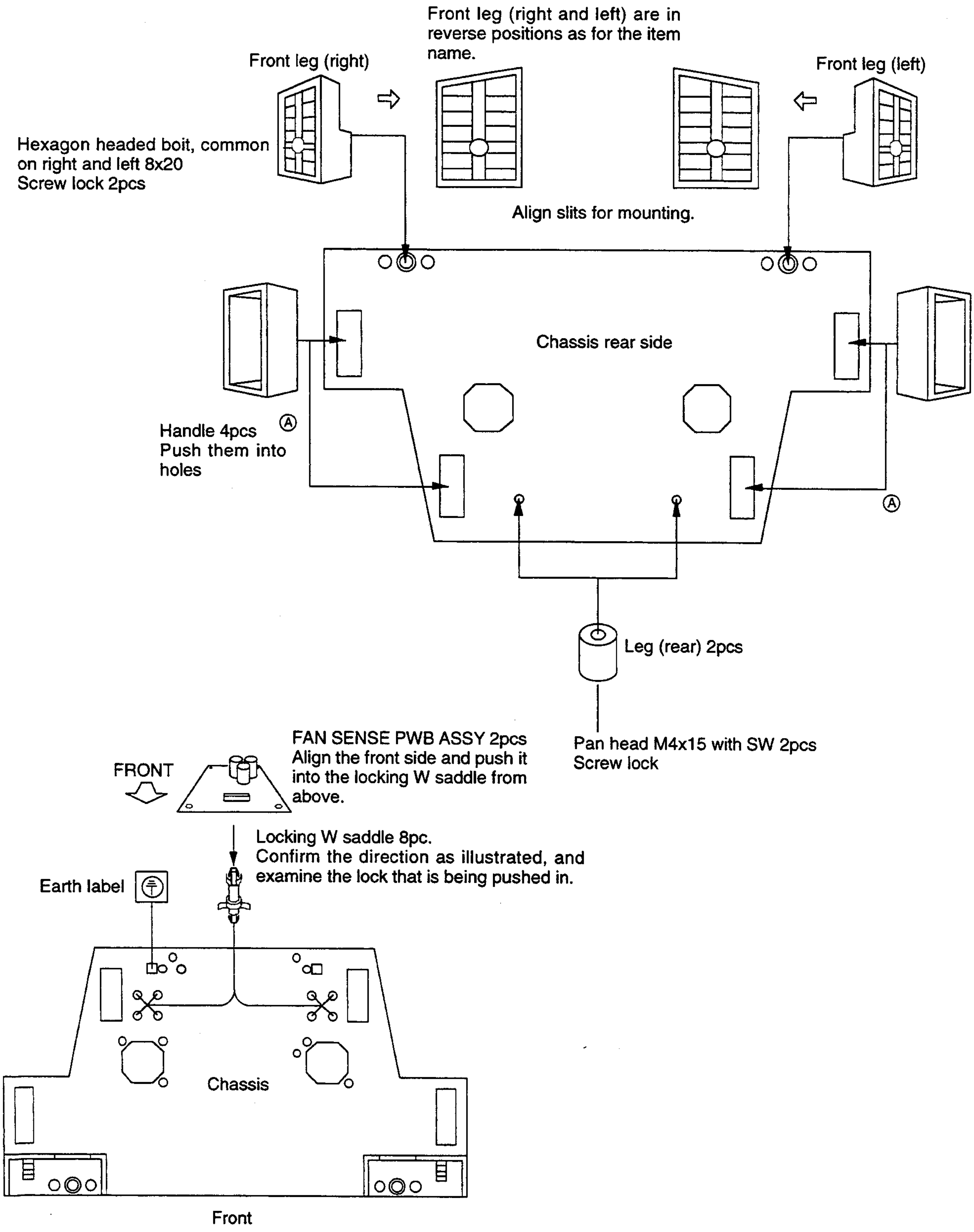
Turn the wires as illustrated and fix them with a mini-bar lock.

Caution:

- Bind the wires so that they pass by the fan.
  The wires shall be twisted to avoid scattering of wires.

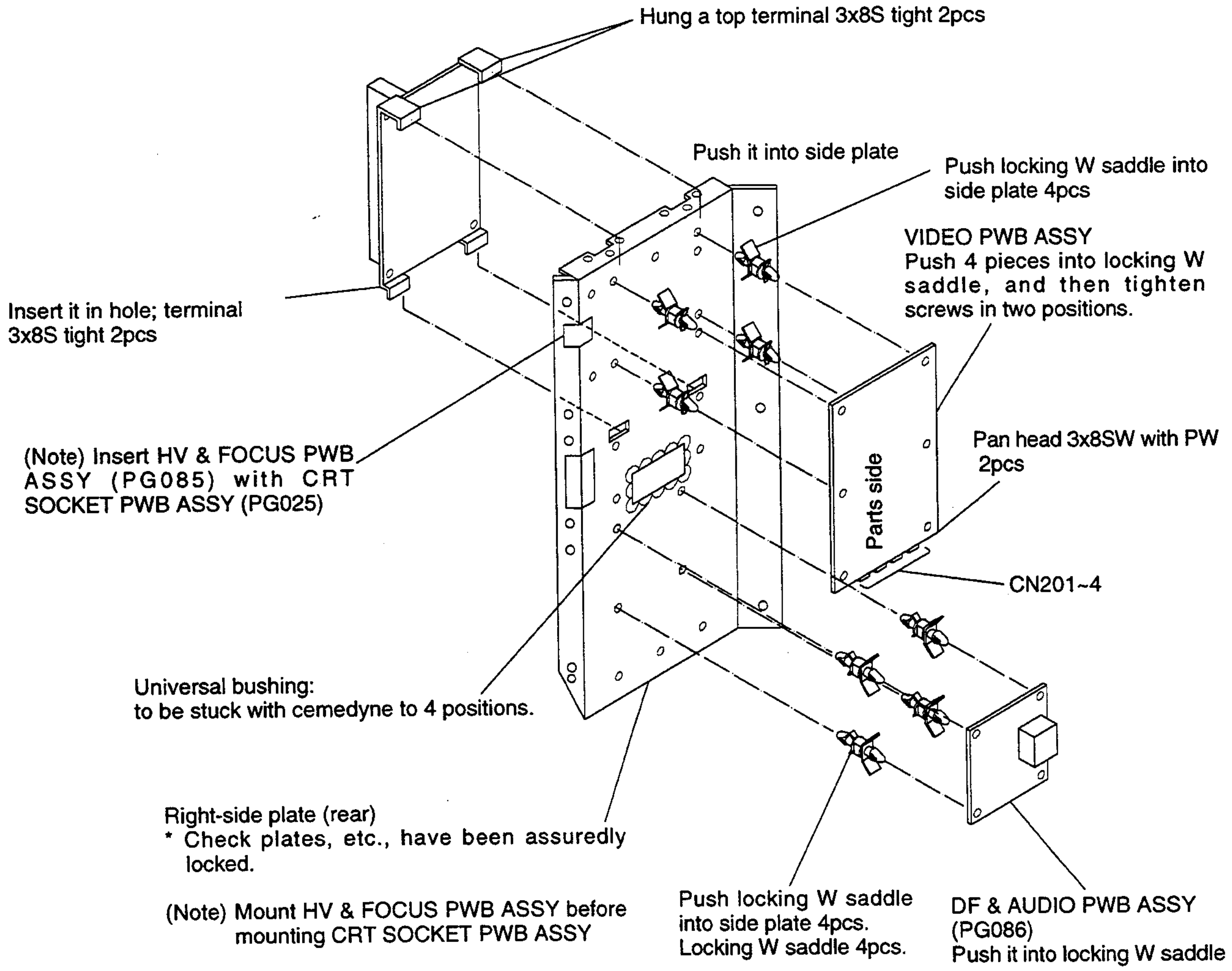

Twist them
Mini-bar lock
Fan 3, 4

Chassis Assembly


Front leg (right) and left) are in reverse positions as for the item name.
Front leg (right)
Front leg (left)
Hexagon headed boit, common on right and left 8x20
Screw lock 2pcs
Align slits for mounting.
Chassis rear side
Handle 4pcs
Ⓐ
Push them into holes
Ⓐ
Leg (rear) 2pcs
Pan head M4x15 with SW 2pcs
Screw lock
FAN SENSE PWB ASSY 2pcs
Align the front side and push it into the locking W saddle from above.
FRONT
Locking W saddle 8pc.
Confirm the direction as illustrated, and examine the lock that is being pushed in.
Earth label
Chassis
Front

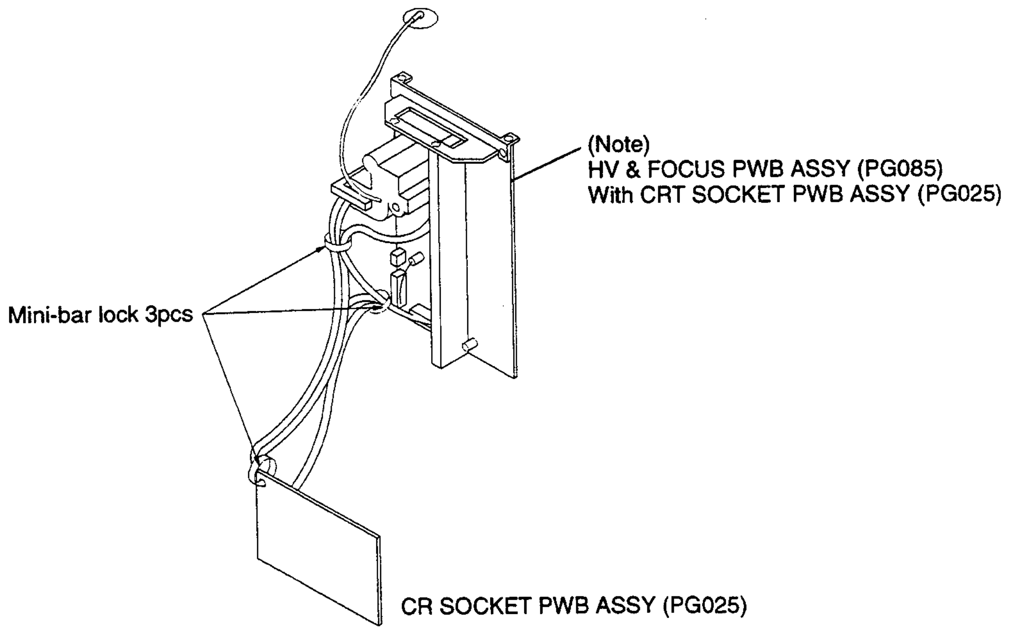
ASSEMBLING METHOD

Right-Side Plate (Rear) Assembly



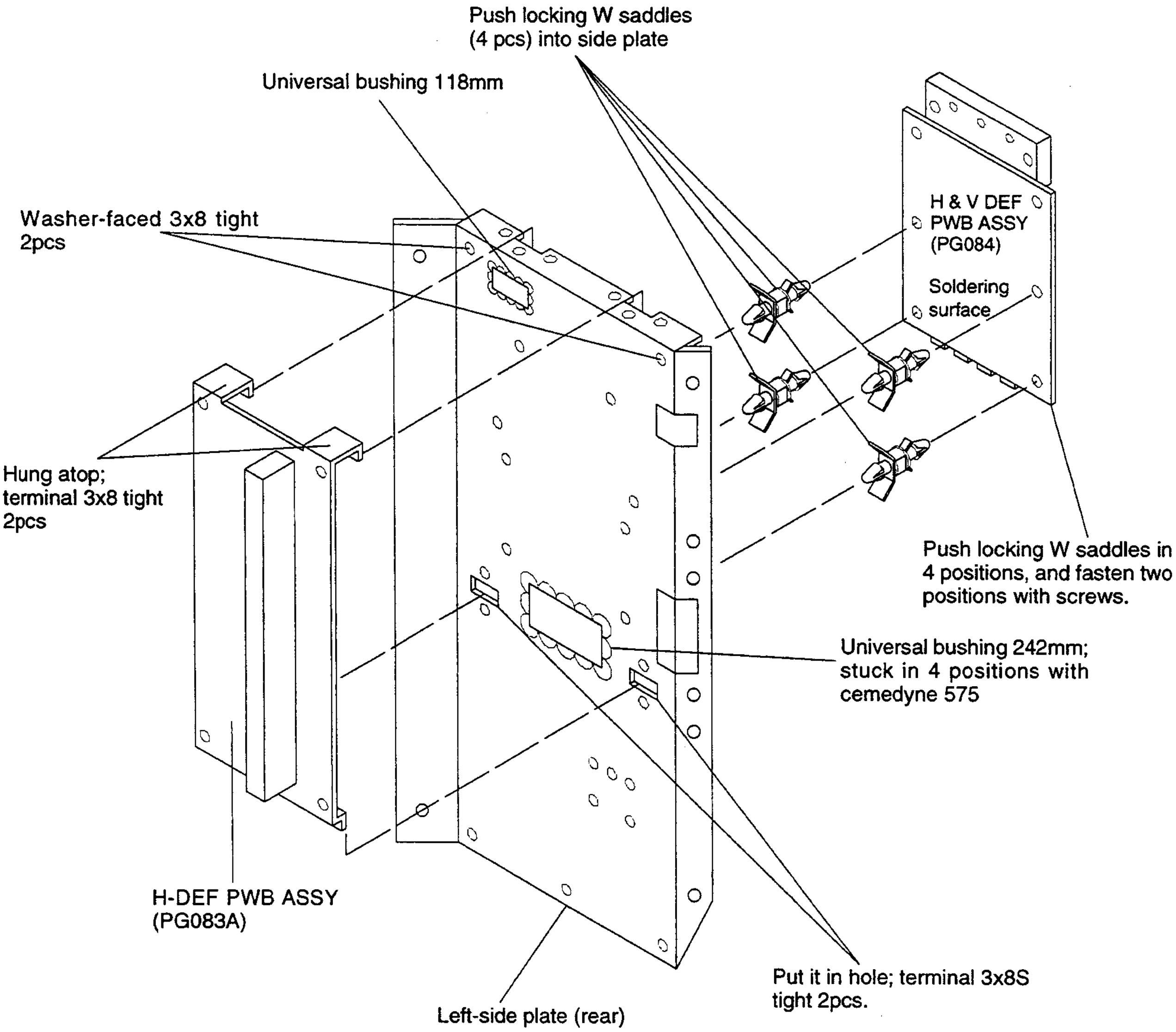
Hung a top terminal 3x8S tight 2pcs
Push it into side plate
Push locking W saddle into side plate 4pcs
VIDEO PWB ASSY
Push 4 pieces into locking W saddle, and then tighten screws in two positions.
Insert it in hole; terminal 3x8S tight 2pcs
(Note) Insert HV & FOCUS PWB ASSY (PG085) with CRT SOCKET PWB ASSY (PG025)
Pan head 3x8SW with PW 2pcs
Parts side
CN201~4
Universal bushing:
to be stuck with cemedyne to 4 positions.
Right-side plate (rear)
* Check plates, etc., have been assuredly locked.
Push locking W saddle into side plate 4pcs.
Locking W saddle 4pcs.
DF & AUDIO PWB ASSY (PG086)
Push it into locking W saddle

(Note) Mount HV & FOCUS PWB ASSY before mounting CRT SOCKET PWB ASSY



(Note)
HV & FOCUS PWB ASSY (PG085)
With CRT SOCKET PWB ASSY (PG025)
Mini-bar lock 3pcs
CR SOCKET PWB ASSY (PG025)

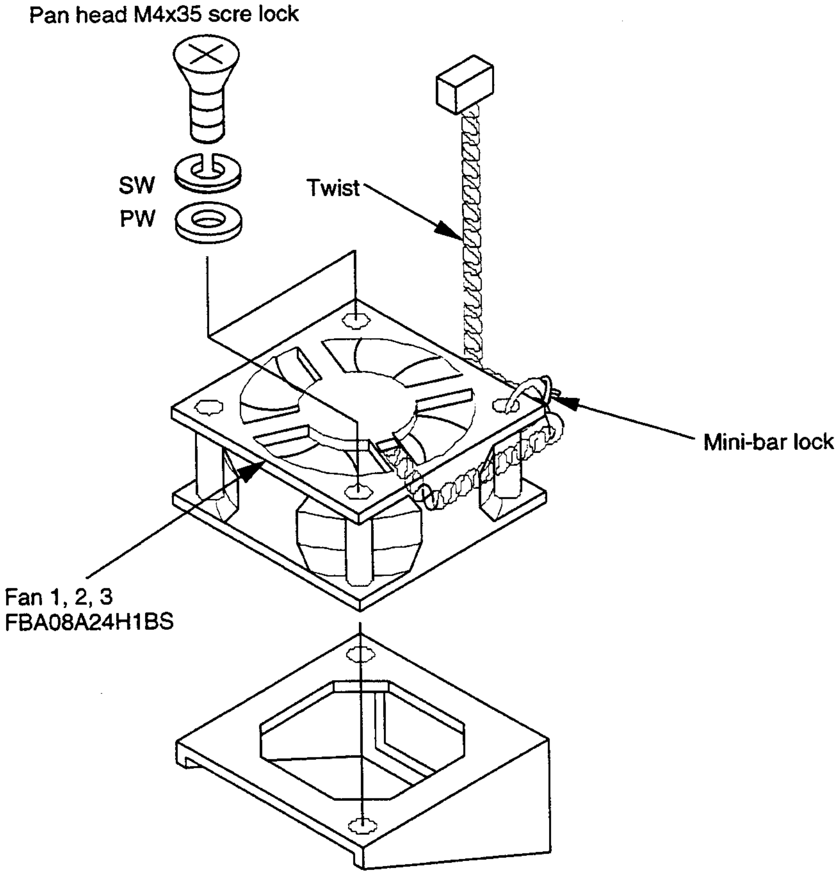
Left-Side Plate (Rear) Assembly

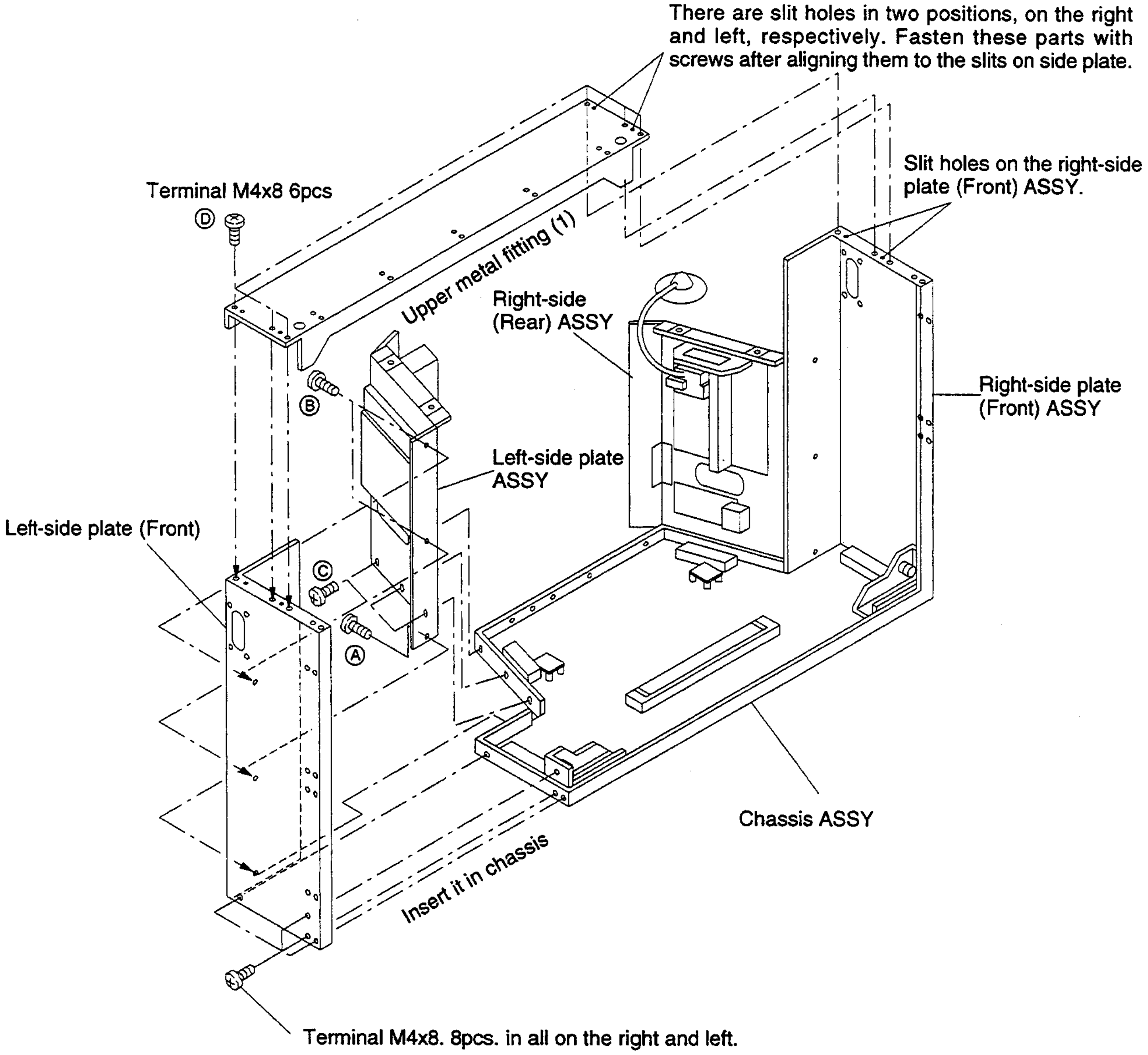

Push locking W saddles
(4 pcs) into side plate
Universal bushing 118mm
Washer-faced 3x8 tight
2pcs
H & V DEF
PWB ASSY
(PG084)
Soldering
surface
Hung atop;
terminal 3x8 tight
2pcs
Push locking W saddles in
4 positions, and fasten two
positions with screws.
Universal bushing 242mm;
stuck in 4 positions with
cemedyne 575
H-DEF PWB ASSY
(PG083A)
Put it in hole; terminal 3x8S
tight 2pcs.
Left-side plate (rear)

Fan 1, 2, 5 Assembly

Working procedures

1. Lay the fan leads as illustrated, and fix them with a mini-bar lock.
   Caution:
   - Leads shall be twisted and press-fixes.
2. Fix the fan to the fan mount with screws, which shall then be locked.
   Caution:
   - When fan lead length is changed, consult the engineering sector for the binding method.


Pan head M4x35 scre lock
SW
PW
Twist
Mini-bar lock
Fan 1, 2, 3
FBA08A24H1BS


There are slit holes in two positions, on the right and left, respectively. Fasten these parts with screws after aligning them to the slits on side plate.
Terminal M4x8 6pcs
Ⓓ
Upper metal fitting (1)
Right-side (Rear) ASSY
Slit holes on the right-side plate (Front) ASSY.
Right-side plate (Front) ASSY
Ⓑ
Left-side plate ASSY
Left-side plate (Front)
Ⓒ
Ⓐ
Chassis ASSY
Insert it in chassis
Terminal M4x8. 8pcs. in all on the right and left.

Ⓐ is terminal M4x8 to be tightened together with left-side plate (Front). Two pices in all on the right and left.

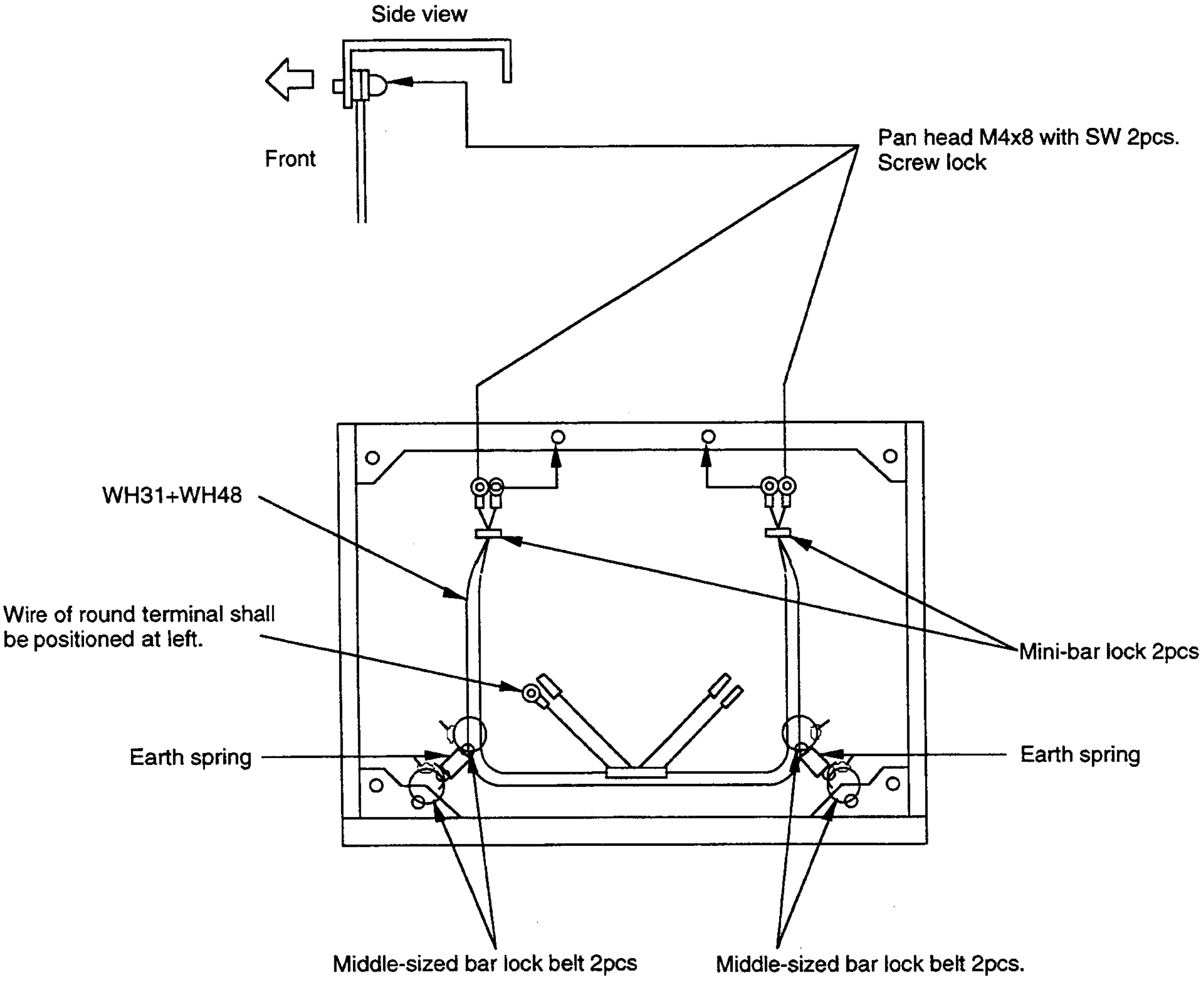
Ⓑ is terminal 3x8S tight. Four pieces in all on the right and left.

Ⓒ is terminal 3x8 tight. Six pieces in all on the right and left. Both right-and left-side plates shall be mounted with common screws.

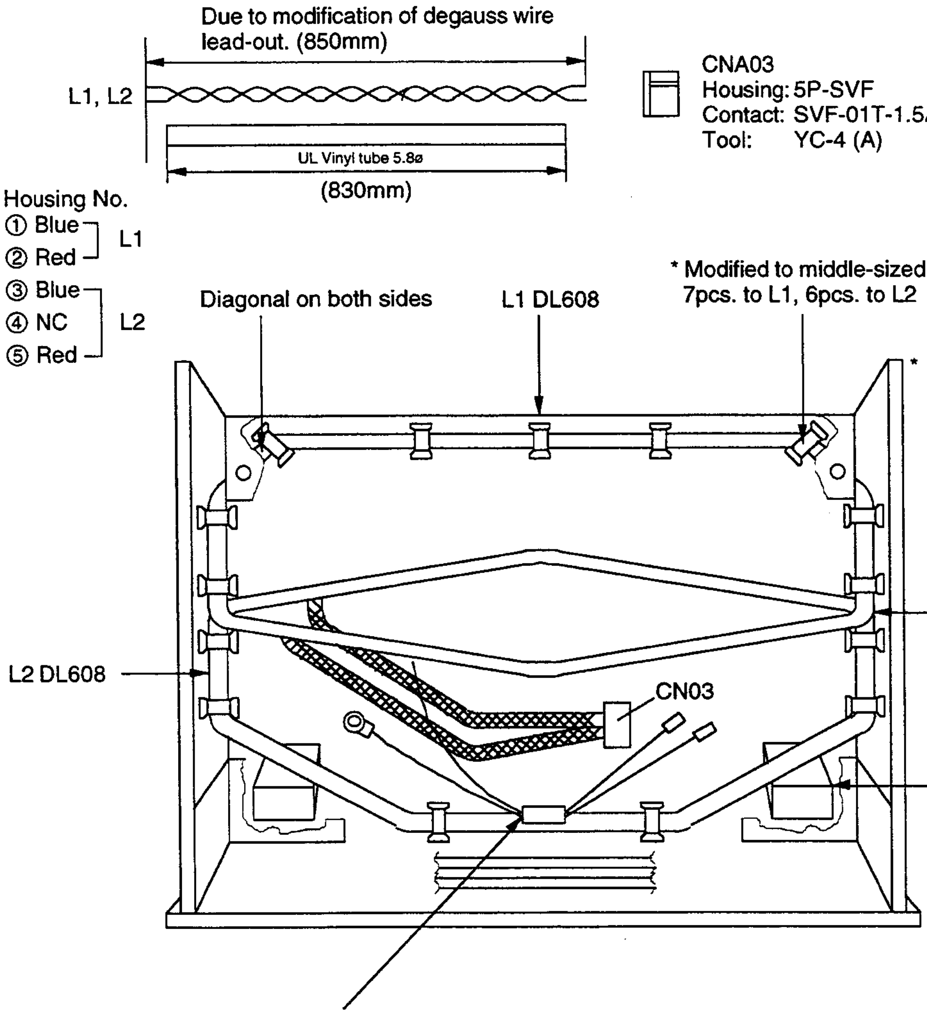
CRT Earth wire Mounting

Working procedures

1. Mount CRT earth wires of WH31 and WH48 on the rear side of the upper metal fitting (1). After mounting, bind two each of the wires with a mini-bar lock in the position 20mm from each round terminal.
   Caution:
   - For WH31, the wire of round terminal should be positioned on the left side.
2. Mount middle-sized bar lock belts on the chassis and flat net sides. Insert one each earth spring between the belts. This work should be done on both right and left sides.
   Caution:
   - The oval distance of each middle-sized bar lock belt should be kept at about 50mm, and do not cut off its tips (to be pulled later).
     The earth spring end shall be smashed to a degree not to permit the middle-sized bar lock.


Side view
Front
Pan head M4x8 with SW 2pcs.
Screw lock
WH31+WH48
Wire of round terminal shall be positioned at left.
Mini-bar lock 2pcs
Earth spring
Earth spring
Middle-sized bar lock belt 2pcs
Middle-sized bar lock belt 2pcs.

Degauss Coil Mounting


Due to modification of degauss wire lead-out. (850mm)
L1, L2
UL Vinyl tube 5.8ø
(830mm)
Housing No.
① Blue
② Red
L1
③ Blue
④ NC
⑤ Red
L2
CNA03
Housing: 5P-SVF
Contact: SVF-01T-1.5A
Tool: YC-4 (A)
Diagonal on both sides
L1 DL608
L2 DL608
CN03

* Modified to middle-sized bar lock belts. 7pcs. to L1, 6pcs. to L2

* The mini-bar lock should be tightened with pliers. Not too much, just not preventing the coil from moving.

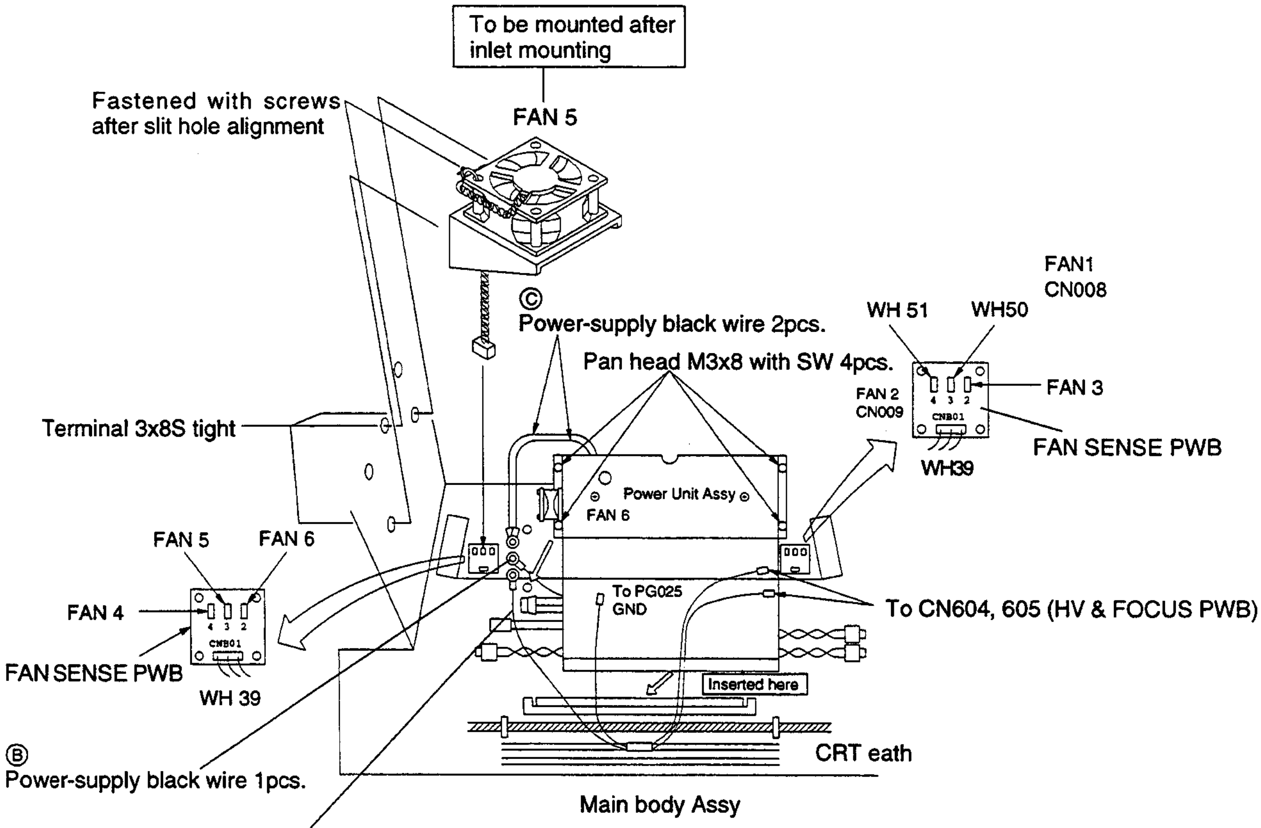
L1 and L2 on both sides shall be at the point about 30mm distant from the mini-bar lock.

L2 on both sides shall be floated not to press the handles.

* The degauss coil shall be mounted so that it is positioned behind the flat mesh wire.

A signal-core wire protruded from the flat-braided earth wire shall be put in the ring of a degauss coil. It must not be caught beneath the degauss coil.

Power Supply Unit and GND Mounting

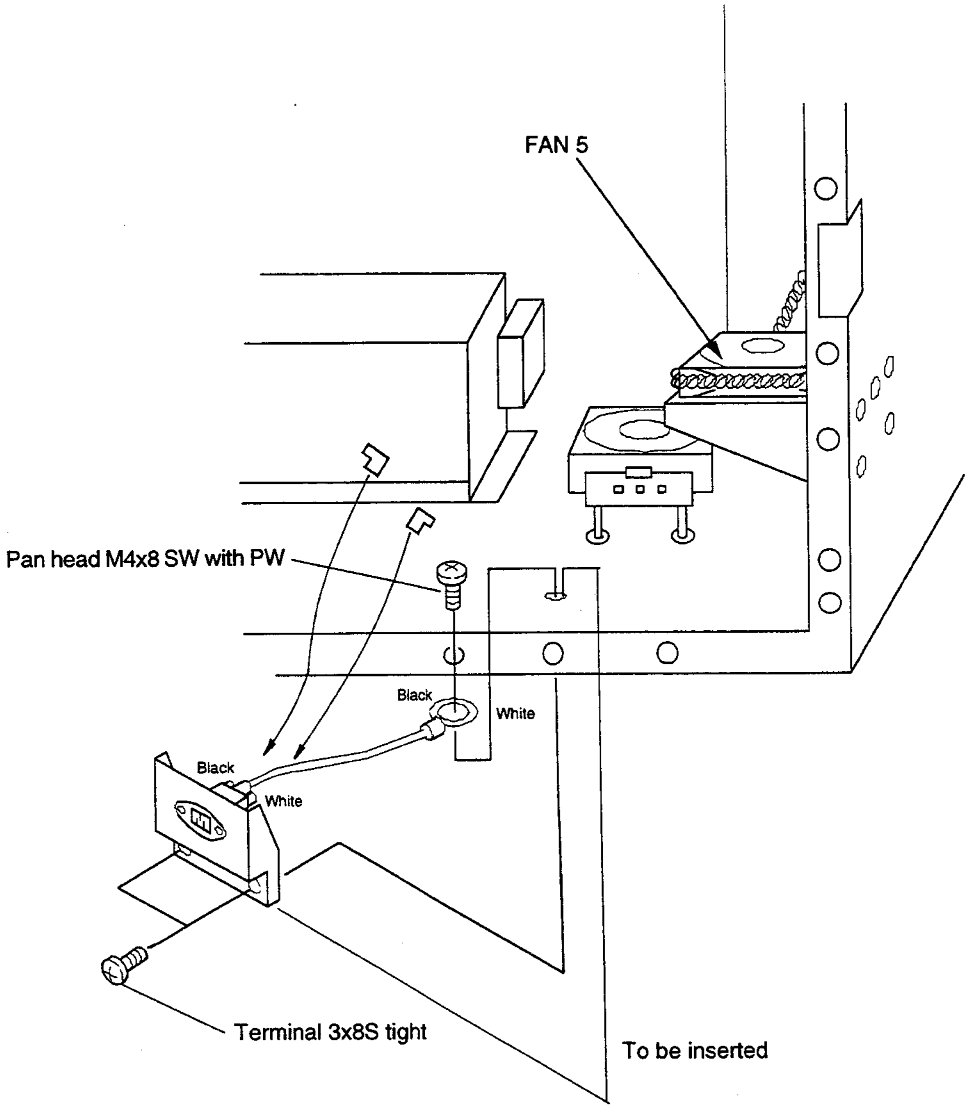

To be mounted after inlet mounting
FAN 5
Fastened with screws after slit hole alignment
© Power-supply black wire 2pcs.
Pan head M3x8 with SW 4pcs.
FAN1
CN008
WH 51
WH50
FAN 2
CN009
4 3 2
CNB01
FAN 3
FAN SENSE PWB
WH39
Terminal 3x8S tight
Power Unit Assy
FAN 6
FAN 5
FAN 6
FAN 4
4 3 2
CNB01
FAN SENSE PWB
WH 39
To PG025 GND
To CN604, 605 (HV & FOCUS PWB)
Inserted here
CRT eath
Ⓑ Power-supply black wire 1pcs.
Main body Assy
Ⓐ CRT round terminal Black wire
Washer-faced 3x8S tight

① Mount GND in 3 positions. Ⓐ Ⓑ ©
② Mount power-supply unit.
③ Make wiring for two FAN SENSE PWB items.
④ Mount FAN 5.

Inlet mounting

Working procedures

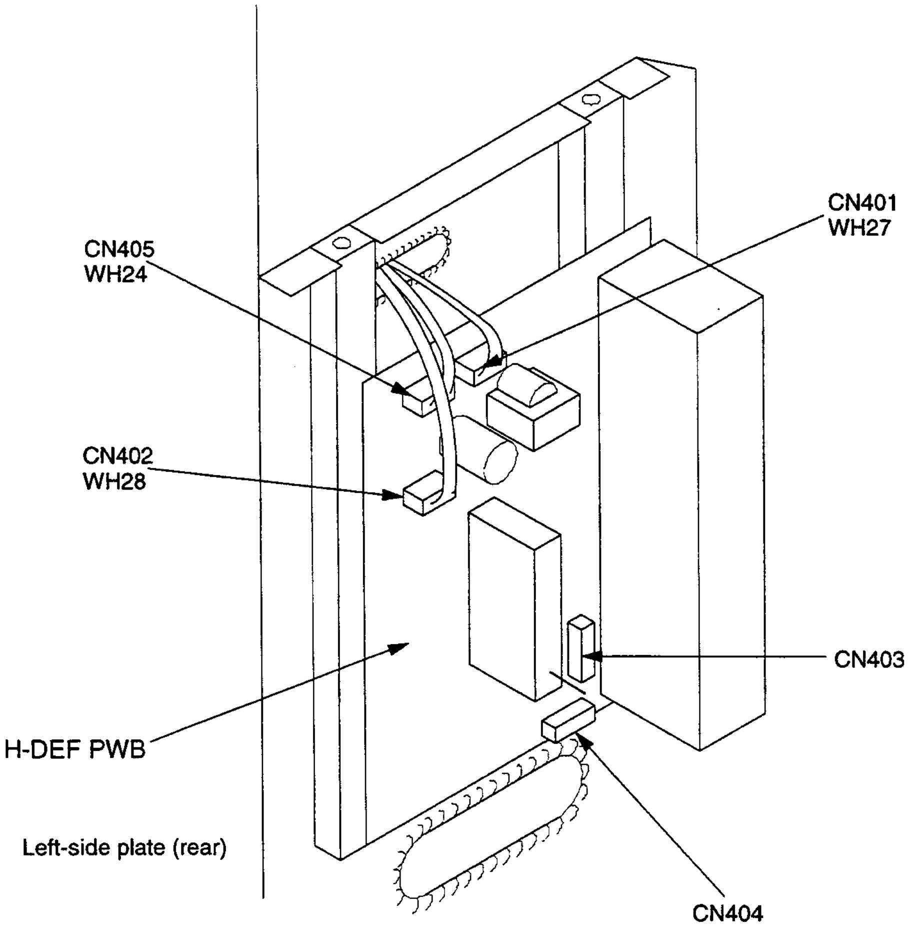
1. The 5-4 wire of the inlet center pin is put in the 4M hole near the inlet, as illustrated.
2. The AC line from the power-supply board shall be connected so that its black wire is connected to the left and white wire to the right, facing the inlet.
3. Insert the inlet mount in the chassis and fasten it with screws.
4. Mount Fan 5.
   Caution:
   - See page 14 for mounting.


FAN 5
Pan head M4x8 SW with PW
Black
White
Black
White
Terminal 3x8S tight
To be inserted

Left-Side Plate wiring 1

Working procedures

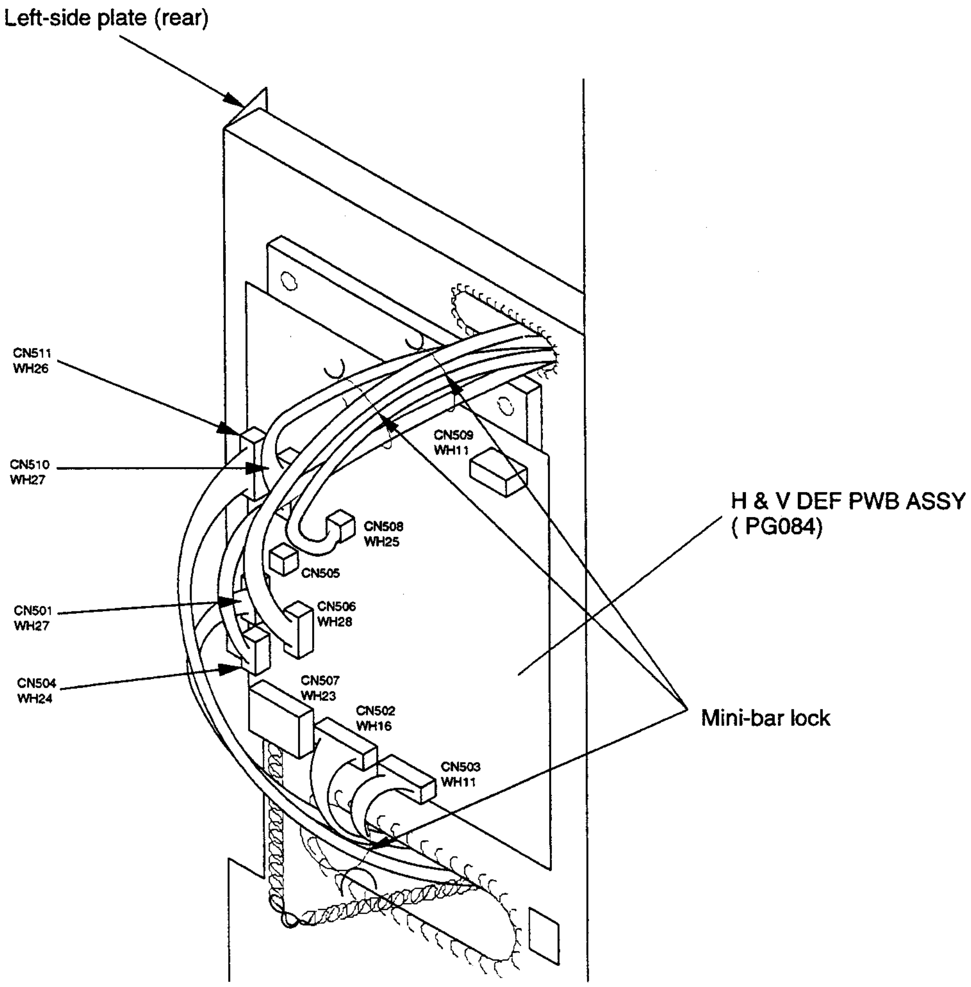
1. Make wiring to CN401, 402, and 405 of H-DEF PWB and lead them out to the front side through the upper hole.


CN405
WH24
CN401
WH27
CN402
WH28
CN403
H-DEF PWB
Left-side plate (rear)
CN404

Left-Side Plate Wiring 2

Working procedures

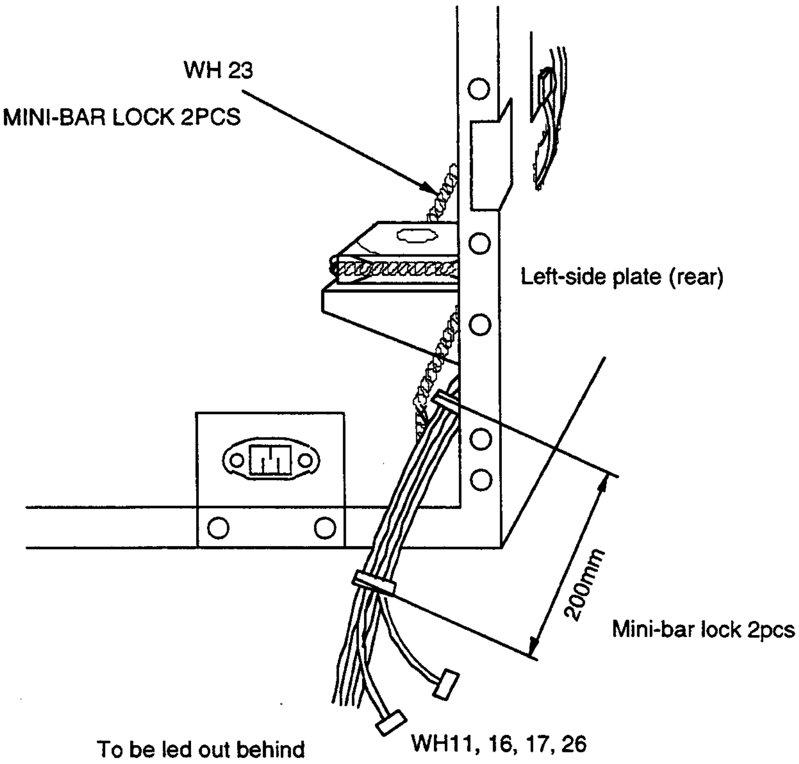
1. Wire the leads from H-DEF PWB (PG083), and passthe other wires out and into the oblong hole at the bottom.
2. Bind wires with mini-bar locks in positions as illustrated (using a harness board).


Left-side plate (rear)
CN511
WH26
CN510
WH27
CN509
WH11
CN508
WH25
CN505
CN506
WH28
CN501
WH27
CN504
WH24
CN507
WH23
CN502
WH16
CN503
WH11
H & V DEF PWB ASSY
(PG084)
Mini-bar lock

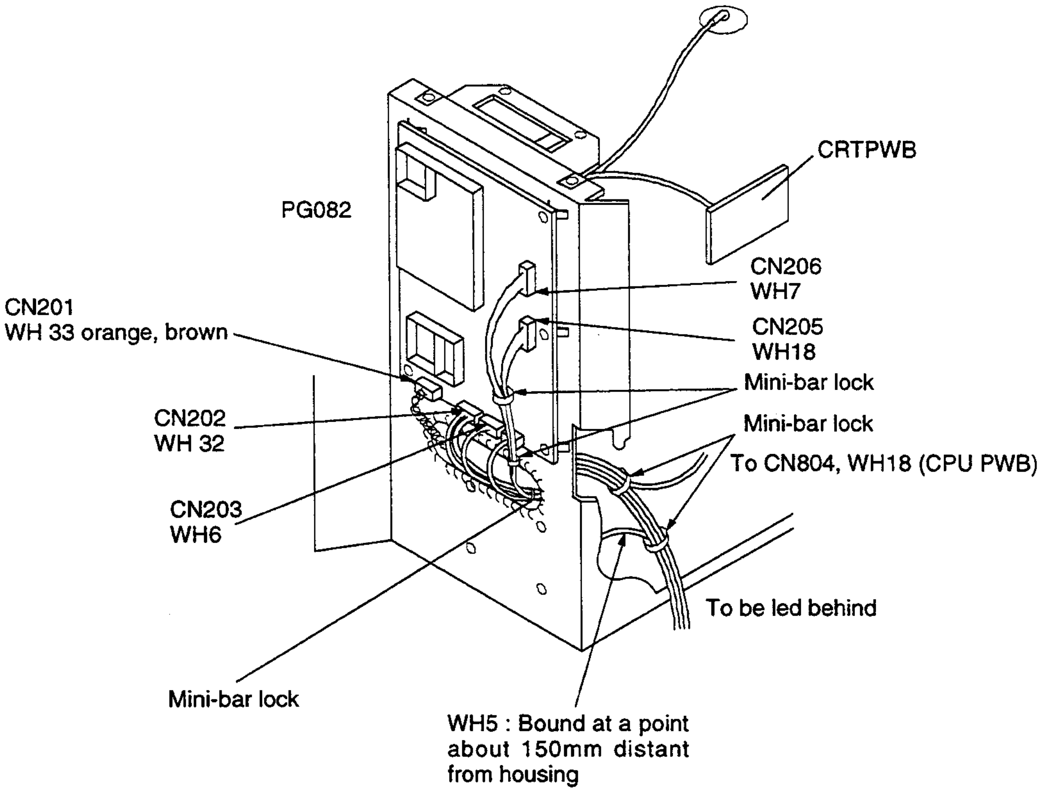
Left-Side Plate Wire Binding

Working procedures

1. WH 23 shall be positioned in front of Fan 5.
2. Remaining wires shall be passed behind Fan 5, and bound with a mini-bar lock in the position beside Fan 5. They shall be bound with another mini-bar lock, about 200mm below the previous binding position.

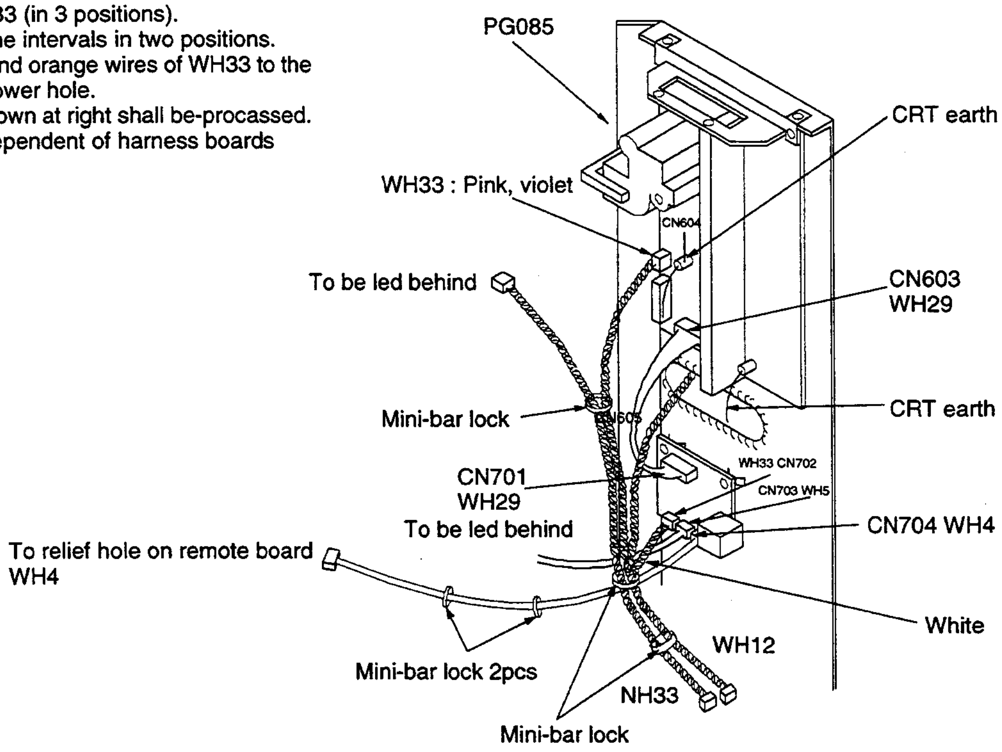

WH 23
MINI-BAR LOCK 2PCS
Left-side plate (rear)
200mm
Mini-bar lock 2pcs
To be led out behind
WH11, 16, 17, 26

Right-Side Plate (Rear) Wiring


CRTPWB
PG082
CN206
WH7
CN201
WH 33 orange, brown
CN205
WH18
Mini-bar lock
CN202
WH 32
Mini-bar lock
To CN804, WH18 (CPU PWB)
CN203
WH6
To be led behind
Mini-bar lock
WH5 : Bound at a point
about 150mm distant
from housing

1. Bind WH12 and WH33 (in 3 positions).
2. Bind WH4 at the same intervals in two positions.
3. Lead out the brown and orange wires of WH33 to the outside through the lower hole.

* Five mini-bar locks shown at right shall be-procassed. This treatment is independent of harness boards


PG085
CRT earth
WH33 : Pink, violet
CN604
To be led behind
CN603
WH29
Mini-bar lock
CN605
CRT earth
WH33 CN702
CN701
WH29
CN703 WH5
To be led behind
CN704 WH4
To relief hole on remote board
WH4
White
WH12
Mini-bar lock 2pcs
NH33
Mini-bar lock

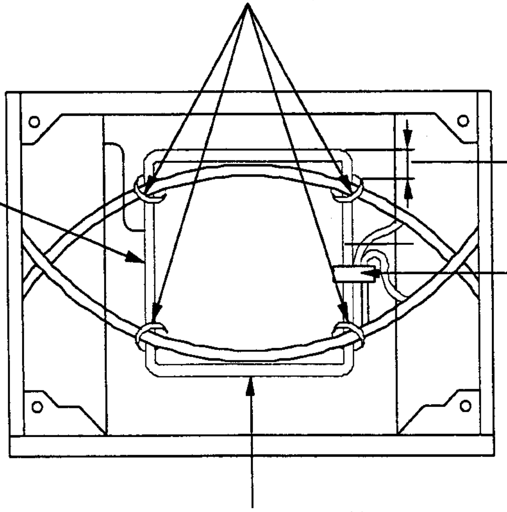
ASSEMBLING METHOD

Landing Coil Mounting

Working procedures

1. Carefully mount the landing coil around the center of Degauss Coil.
2. Bind lead wires of the degauss coil on the landing coil.

   Caution:
   - Get lead wires protruded from mini-bar lock to the housing by about 600±20mm.
   - The landing coil shall be mounted behind the degauss coil.



Mini-bar lock 4pcs

Landing coil (DL664A) : Pass it through a hole on the left-side plate. Mounting shall be such that the lead wires are protruded upwad.

Bound in 4 positions, about 50mm distant

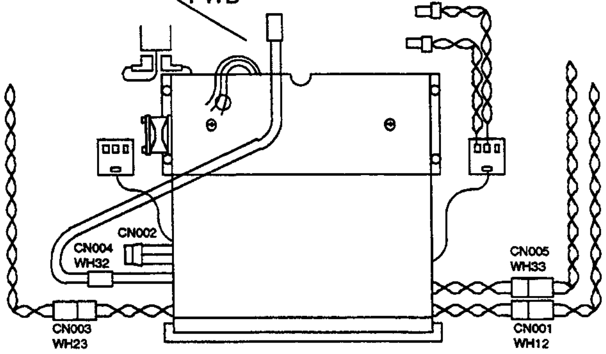
Bind a min-bar lock wire and two degauss coil wires.

Leading coil is mounted behind degauss coil.

Power- Supply Wiring

Working procedures

1. Make wiring according to the connection diagram.



Degauss wires; to CNA03

To CN305 of CRT PWB

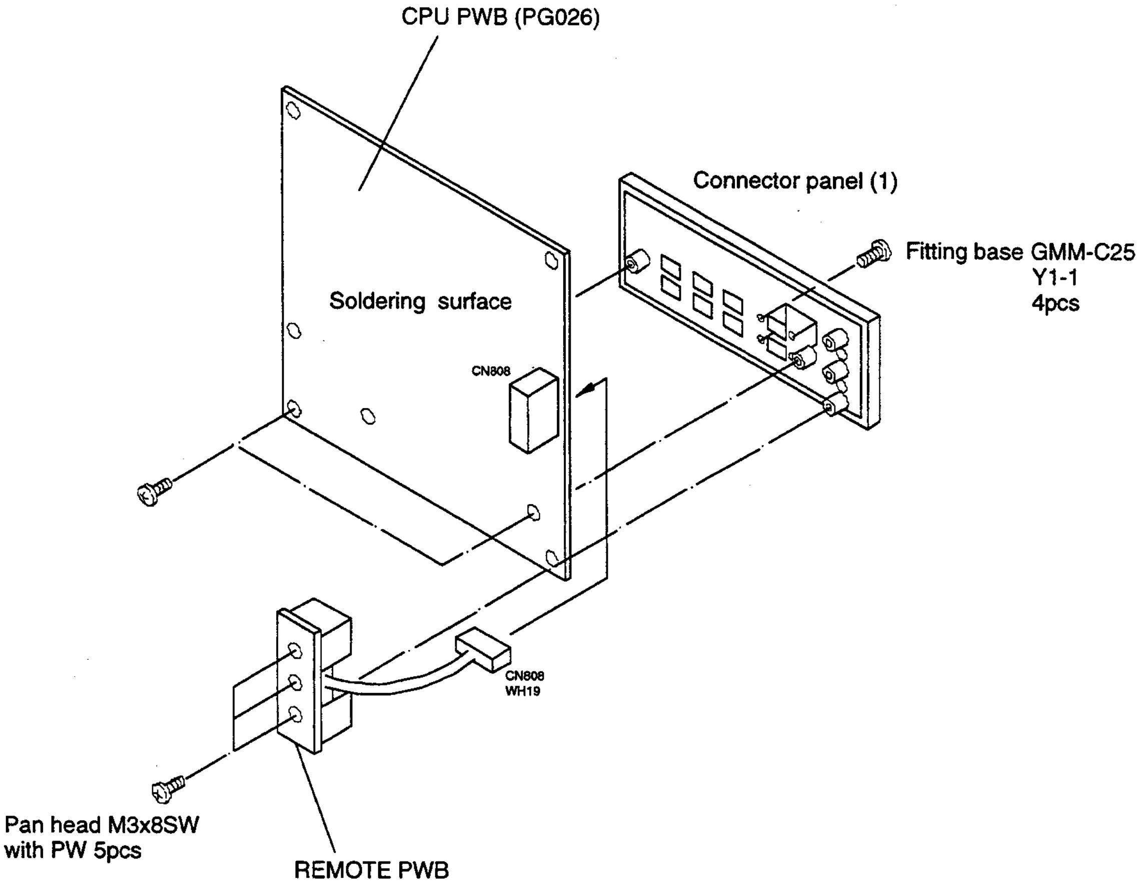
CPU Board Assembly

Working procedures

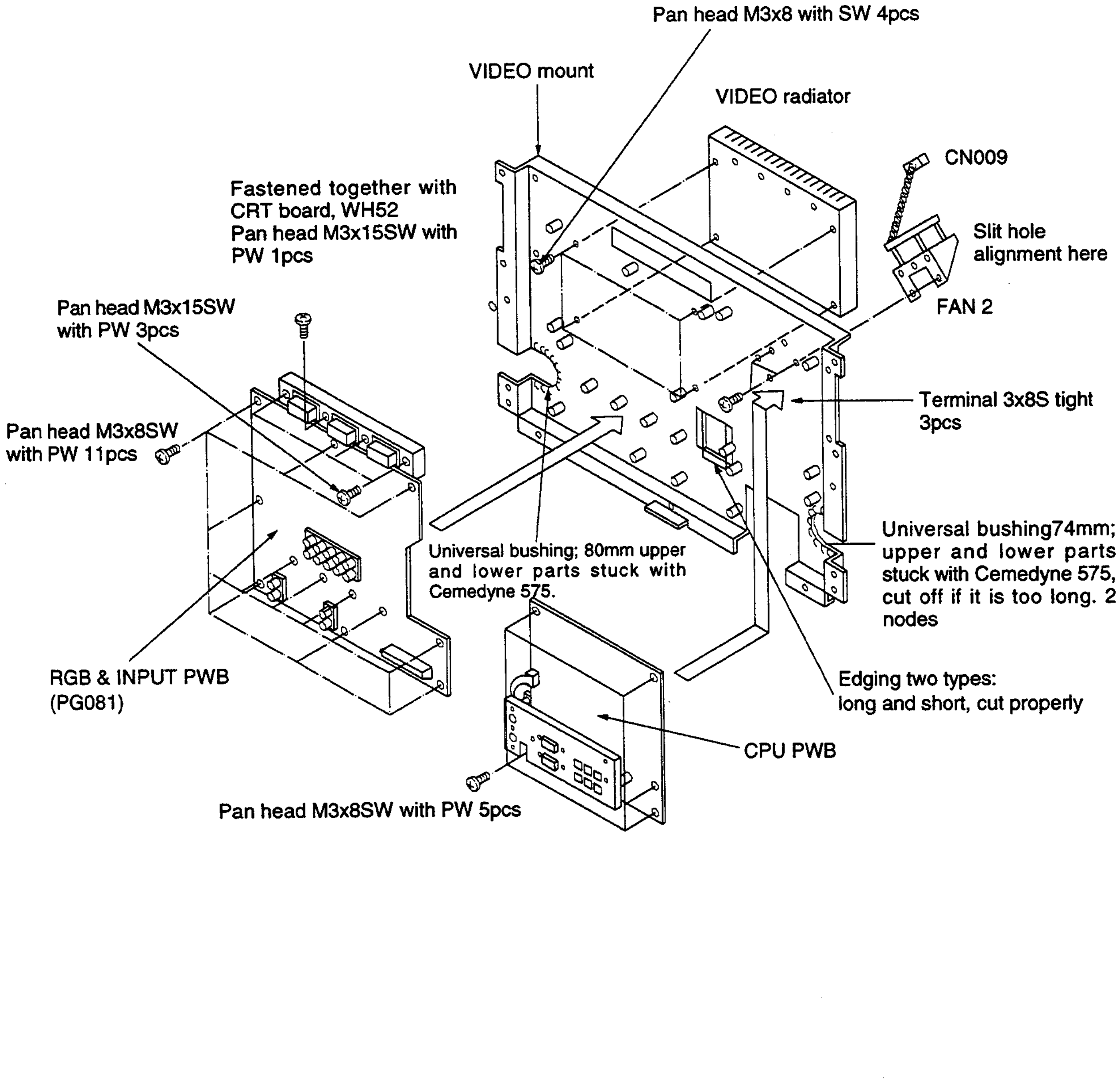
1. Mounting shall be done according to the illustration.

   Caution:

   - Mount the fitting base lastly.


CPU PWB (PG026)
Connector panel (1)
Fitting base GMM-C25
Y1-1
4pcs
Soldering surface
CN808
CN808
WH19
Pan head M3x8SW
with PW 5pcs
REMOTE PWB

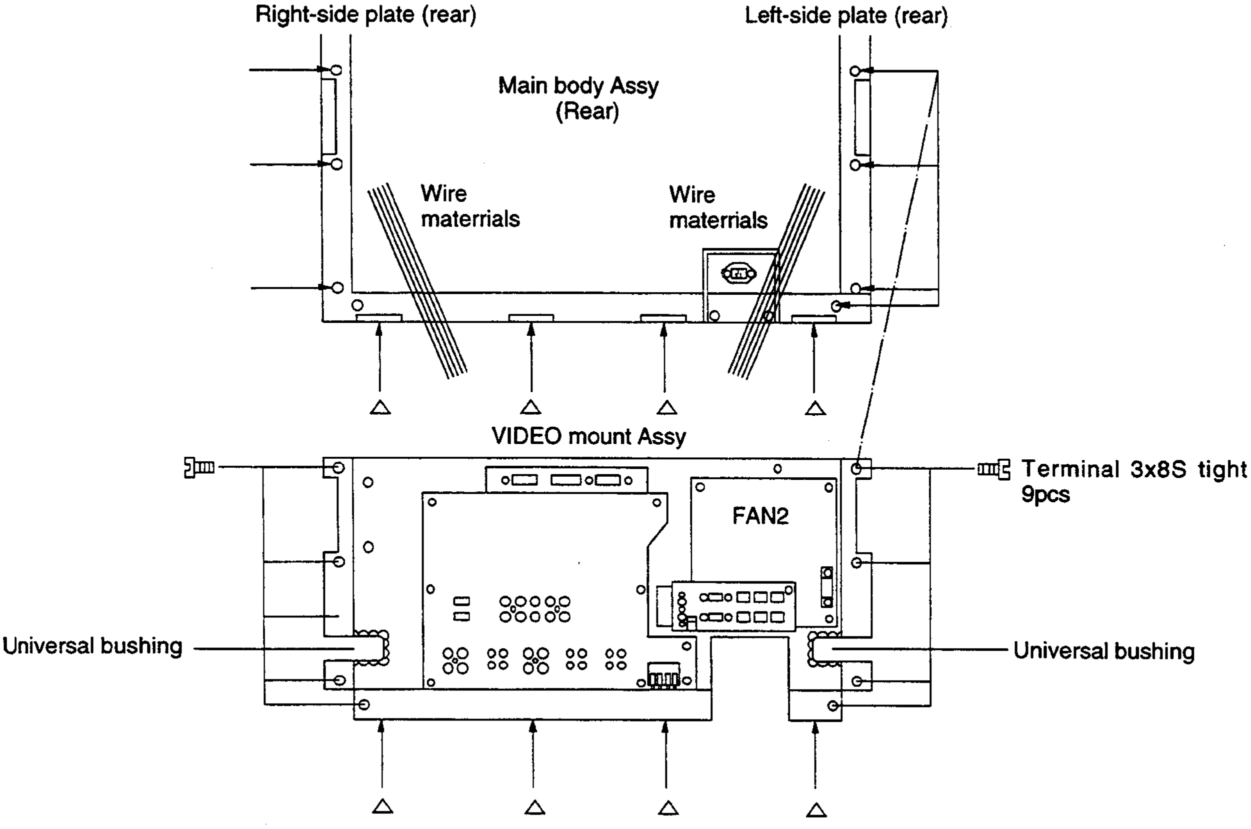
VIDEO Mount Assembly


Pan head M3x8 with SW 4pcs
VIDEO mount
VIDEO radiator
CN009
Fastened together with CRT board, WH52 Pan head M3x15SW with PW 1pcs
Slit hole alignment here
Pan head M3x15SW with PW 3pcs
FAN 2
Terminal 3x8S tight 3pcs
Pan head M3x8SW with PW 11pcs
Universal bushing; 80mm upper and lower parts stuck with Cemedyne 575.
Universal bushing74mm; upper and lower parts stuck with Cemedyne 575, cut off if it is too long. 2 nodes
RGB & INPUT PWB (PG081)
Edging two types: long and short, cut properly
CPU PWB
Pan head M3x8SW with PW 5pcs

VIDEO Mount Assembly

Working procedures

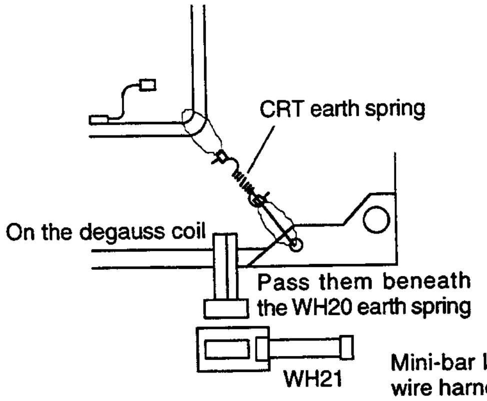
1. The folded-back part on the lower side of VIDEO mount shall be put in the chassis hole, and then fastened with screws.
   Caution:
   - The wiring materials proturded in this case shall be led out of the universal bushing hole, referring to page 6-23.
2. Connect the Fan 2 wire to the wire from CN009 (WH51) of FAN SENSE PWB.
   Caution:
   - A shorter center tie line.
     (Reference) Longer one for WH50.

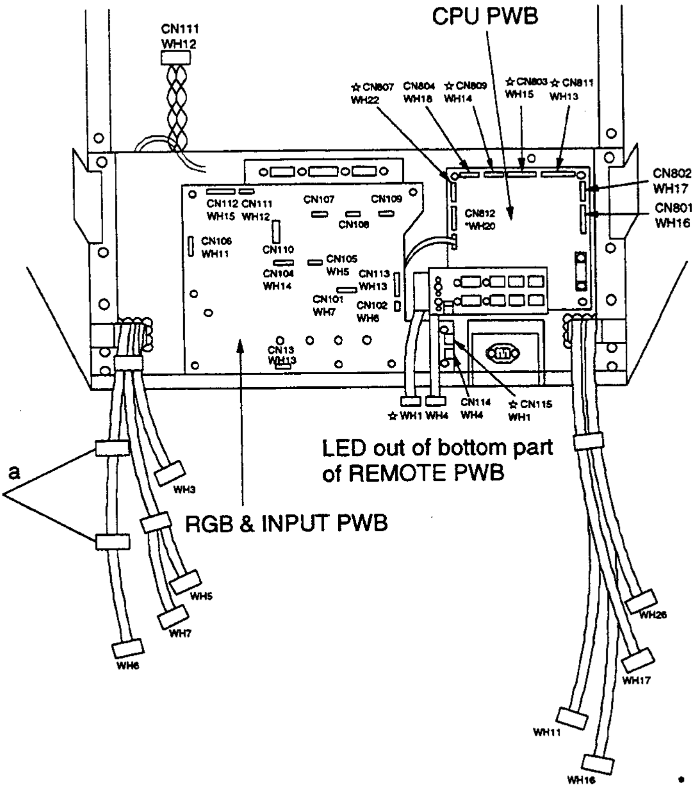

Right-side plate (rear)
Left-side plate (rear)
Main body Assy (Rear)
Wire materrials
Wire materrials
VIDEO mount Assy
FAN2
Terminal 3x8S tight 9pcs
Universal bushing
Universal bushing

Mark △ : Insert fold-back part of VIDEO mount.

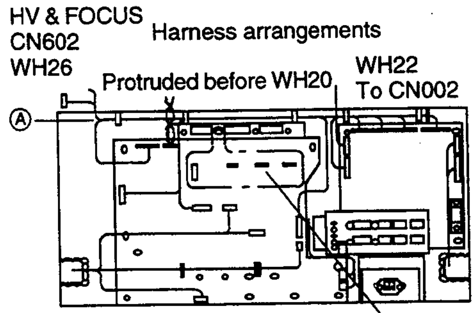
VIDEO Mount Wiring

Method of WH20 lead-out


CRT earth spring
On the degauss coil
Pass them beneath the WH20 earth spring
WH21

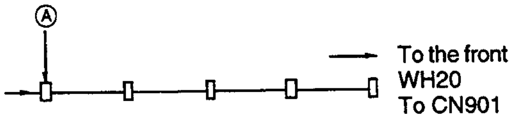

CPU PWB
CN111
WH12
☆CN807 WH22
CN804 WH18
☆CN809 WH14
☆CN803 WH15
☆CN811 WH13
CN802 WH17
CN801 WH16
CN112 WH15
CN111 WH12
CN107
CN109
CN108
CN812 *WH20
CN106 WH11
CN110
CN104 WH14
CN105 WH5
CN113 WH13
CN101 WH7
CN102 WH6
CN13 WH13
☆WH1 WH4
CN114 WH4
☆CN115 WH1
LED out of bottom part of REMOTE PWB
Mini-bar lock with a wire harness lock
RGB & INPUT PWB
WH3
WH5
WH7
WH6
WH26
WH17
WH11
WH16

Harness arrangements


HV & FOCUS
CN602
WH26
Protruded before WH20
WH22
To CN002
Ⓐ

Mark Use a mini-bar lock, together with a harness board For the other two wires, fix wire materials to the VIDEO mount.

Wires come from the CRT board


Ⓐ
To the front
WH20
To CN901
WH22
To CN002
CN807

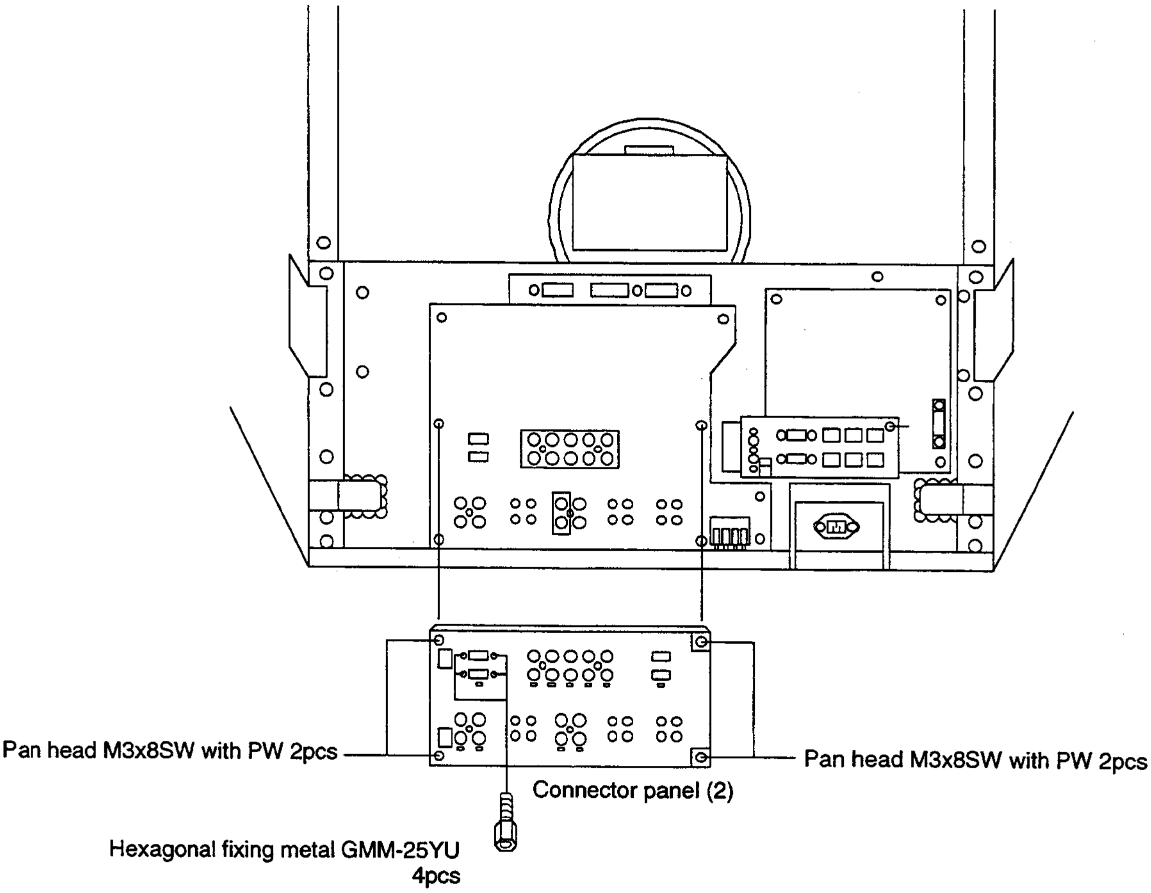
Mini-bar lock with a wire harness lock

Connector Panel (2) Mounting

Working procedures

1. Mounted as illustrated.

   Caution:
   - Pay attention to the use of screws.
   - Types are different between right and left.
   - To be done after completion of wiring.


Pan head M3x8SW with PW 2pcs
Pan head M3x8SW with PW 2pcs
Connector panel (2)
Hexagonal fixing metal GMM-25YU
4pcs

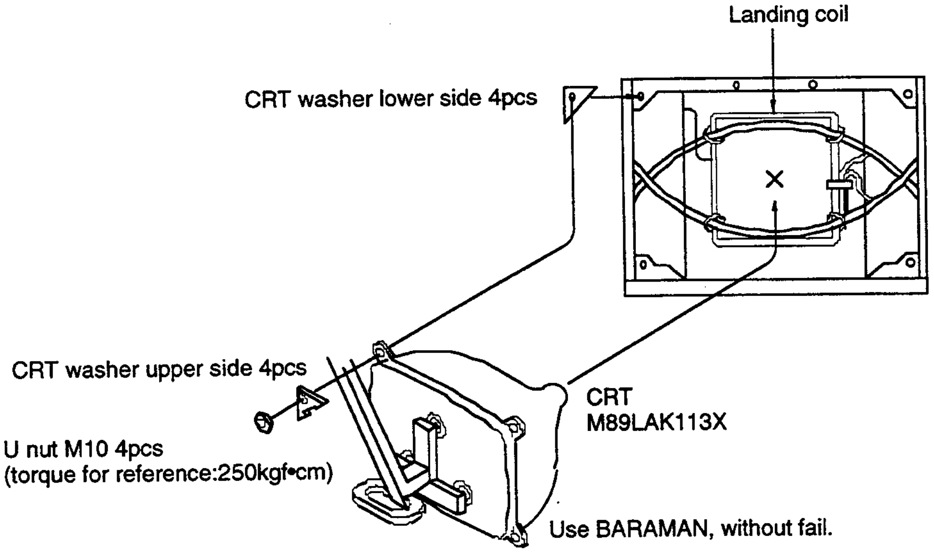
ASSEMBLING METHOD

CRT Mounting

Working procedures

1. Use BARAMAN for mounting, as illustrated.

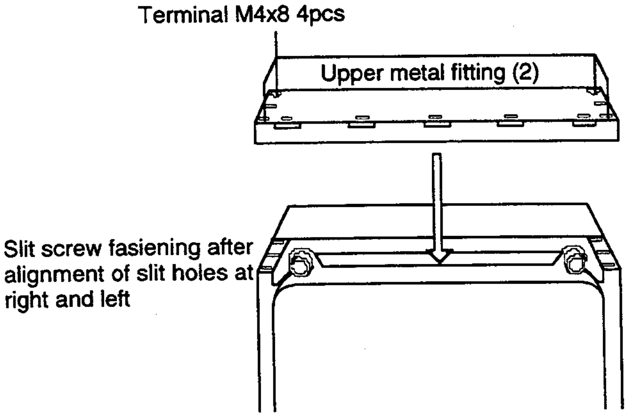
   Caution:
   - Prior to CRT installation, all wires of power supply shall have been wired.
   - Note that the CRT washers are different between upper use and lower use.
     Mount the CRT so that its neck settles in the center of the landing coil.


Landing coil
CRT washer lower side 4pcs
CRT washer upper side 4pcs
U nut M10 4pcs
(torque for reference:250kgf•cm)
CRT
M89LAK113X
Use BARAMAN, without fail.

Mounting of Upper Metal Fitting (2)

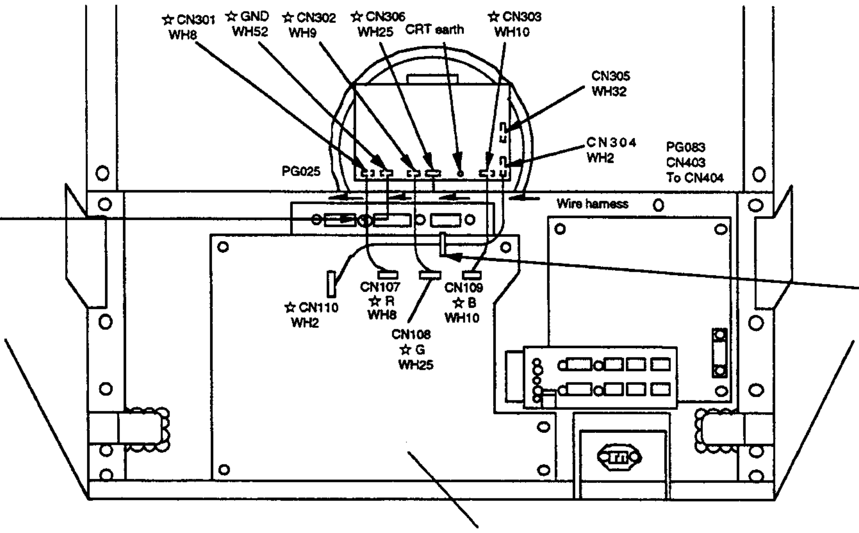
Working procedures

1. Make screw tightening after alignment of main-body side slits to fitting-side holes.


Terminal M4x8 4pcs
Upper metal fitting (2)
Slit screw fasiening after
alignment of slit holes at
right and left

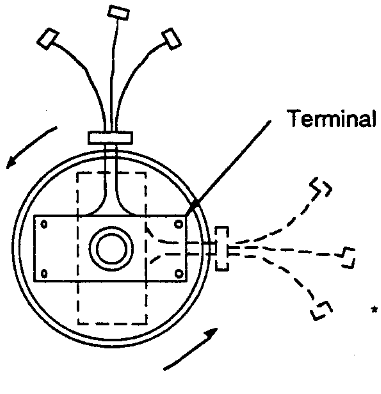
Deflection Yoke, PG025 Mounting

WH52 fastened in common. Pan head 3x15SW with PW


☆CN301 WH8
☆GND WH52
☆CN302 WH9
☆CN306 WH25
CRT earth
☆CN303 WH10
CN305 WH32
CN304 WH2
PG083 CN403 To CN404
PG025
Wire harness
☆CN110 WH2
CN107 ☆R WH8
CN108 ☆G WH25
CN109 ☆B WH10

Mini-bar lock 1pcs

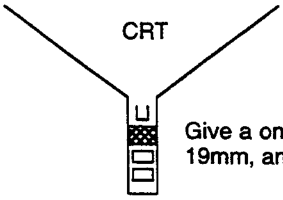
RGB & INPUT PWB



Terminal board

* When inserting deflection yoke in the neck, arrange the terminal board sidways.

Wires marked by ☆ shall be passed above the wire harness previously completed.

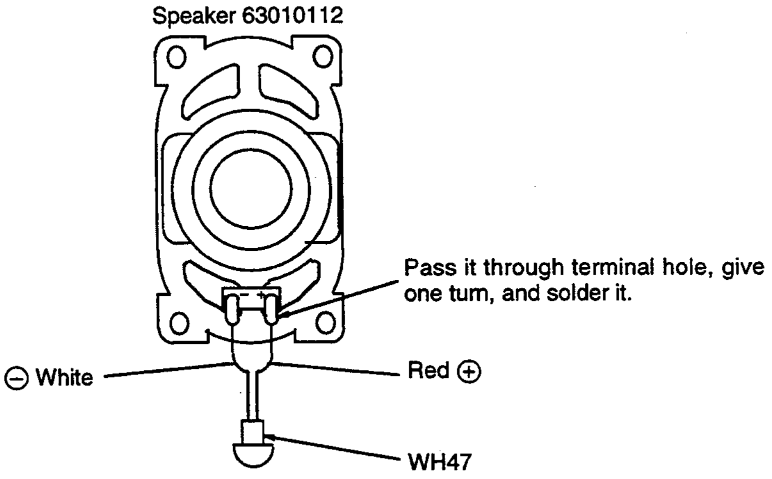


Give a one turn of an acetate tape in the width of 19mm, and then mount the yoke.

Speaker

Working procedures

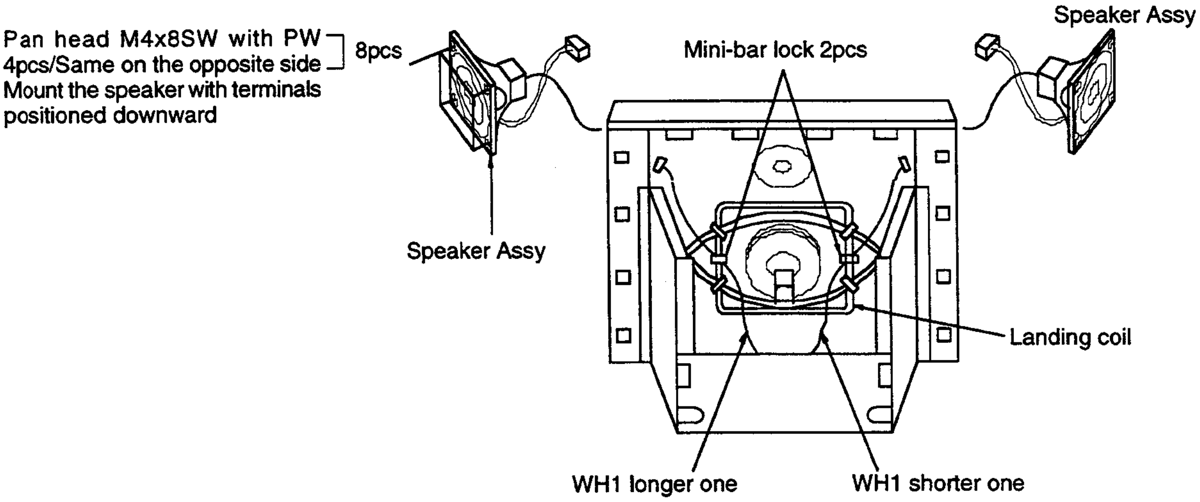
1. Pass WH 47 through the terminal hole, give one turn, and solder it.


Speaker 63010112
Pass it through terminal hole, give one turn, and solder it.
⊖ White
Red ⊕
WH47

Speaker Mounting

Working procedures

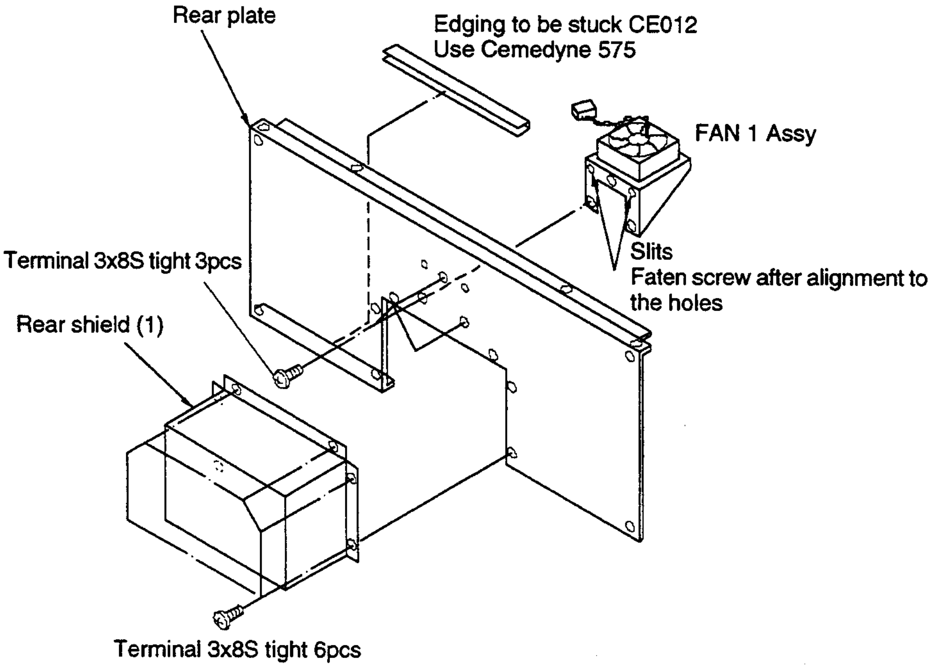
1. Mount the wired speaker on the front side of side plate, with the terminals facing downward.
   Caution:
   - Be careful not to give a hole to the speaker. Do not let the screwdriver slide in this case.
2. Fix the longer and shorter lead wires of WH1 to the landing coil, as illustrated.


Pan head M4x8SW with PW 4pcs/Same on the opposite side 8pcs
Mount the speaker with terminals positioned downward
Speaker Assy
Mini-bar lock 2pcs
Speaker Assy
Landing coil
WH1 longer one
WH1 shorter one

Rear panel Assy

Working procedures

1. Stick the edging to the position illustrated.
   Caution:
   - To a degree not to permit the edging to drop off.
2. Mount FAN 1 in the position, as illustrated.
   Caution:
   - Fasten screws after alignment of slit holes.
3. Mount the rear shield (1) in the position illustrated.


Rear plate
Edging to be stuck CE012
Use Cemedyne 575
FAN 1 Assy
Terminal 3x8S tight 3pcs
Rear shield (1)
Slits
Faten screw after alignment to the holes
Terminal 3x8S tight 6pcs

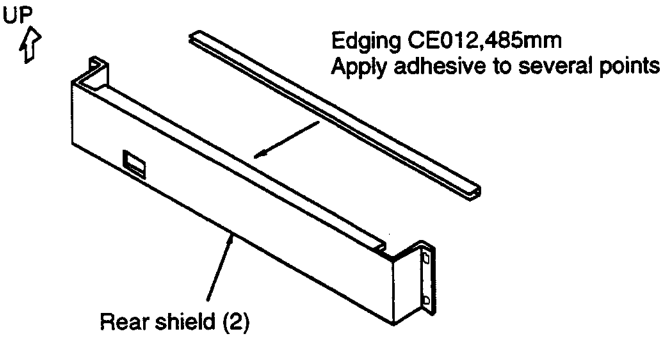
Rear Shield (2) Processing

Working procedures

1. Mount the edging in position, as illustrated.

   Caution:

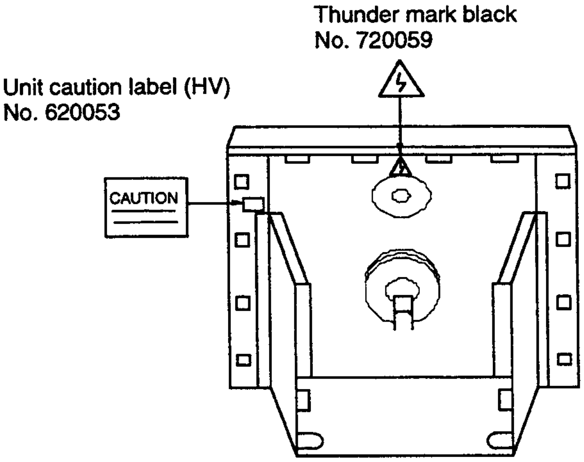
   - Mount the edging after applying cemedyne 575 to it in several positions.


UP
Edging CE012,485mm
Apply adhesive to several points
Rear shield (2)

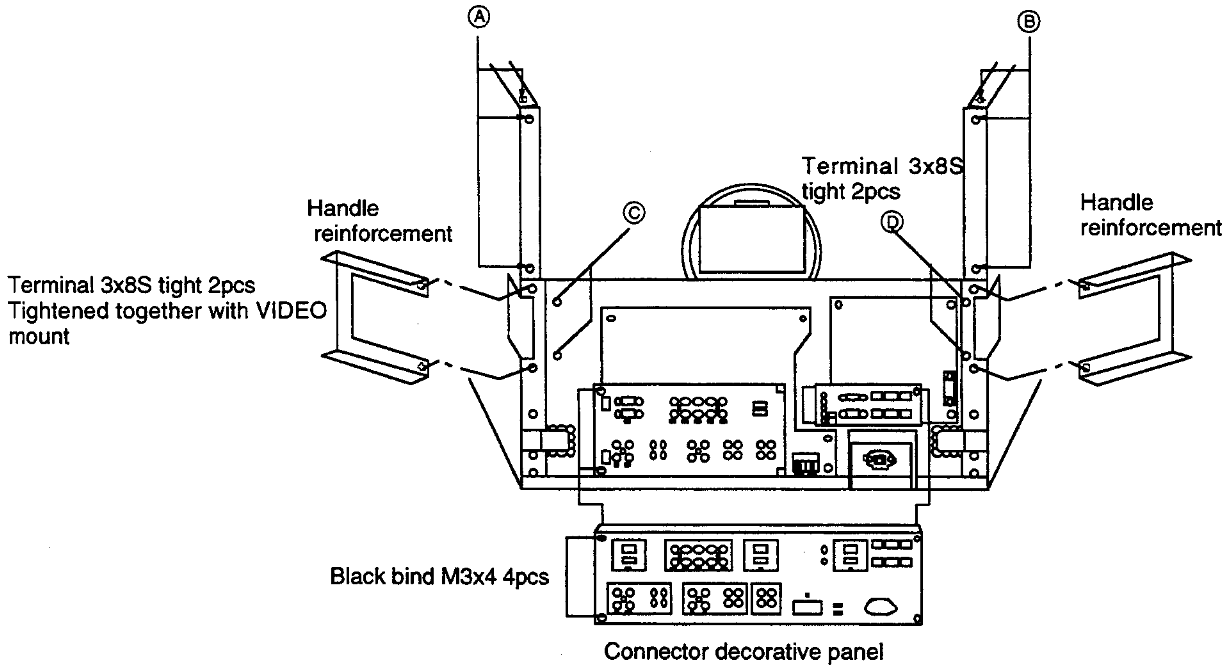
Adhesion of Each Label

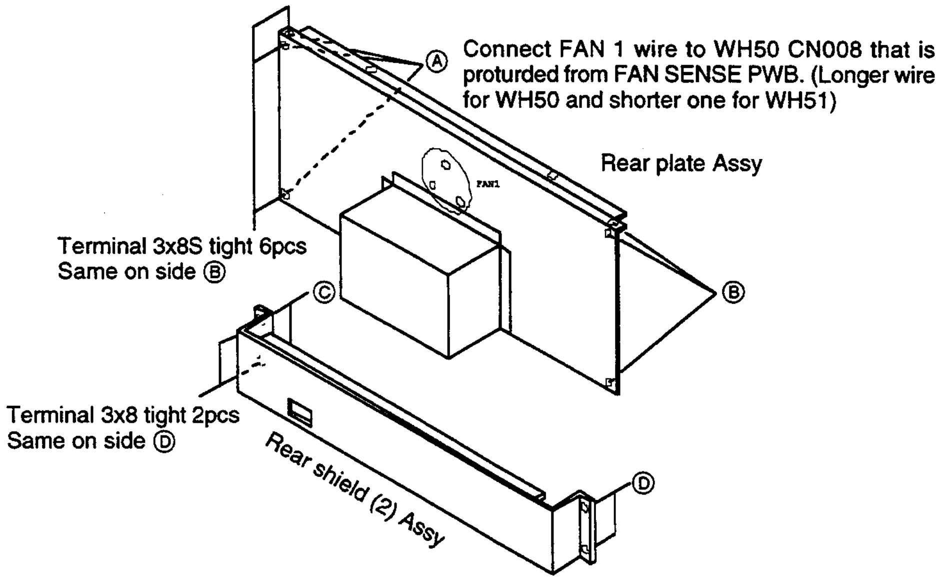
Working procedures

1. Stick labels in positions, as illustrated.

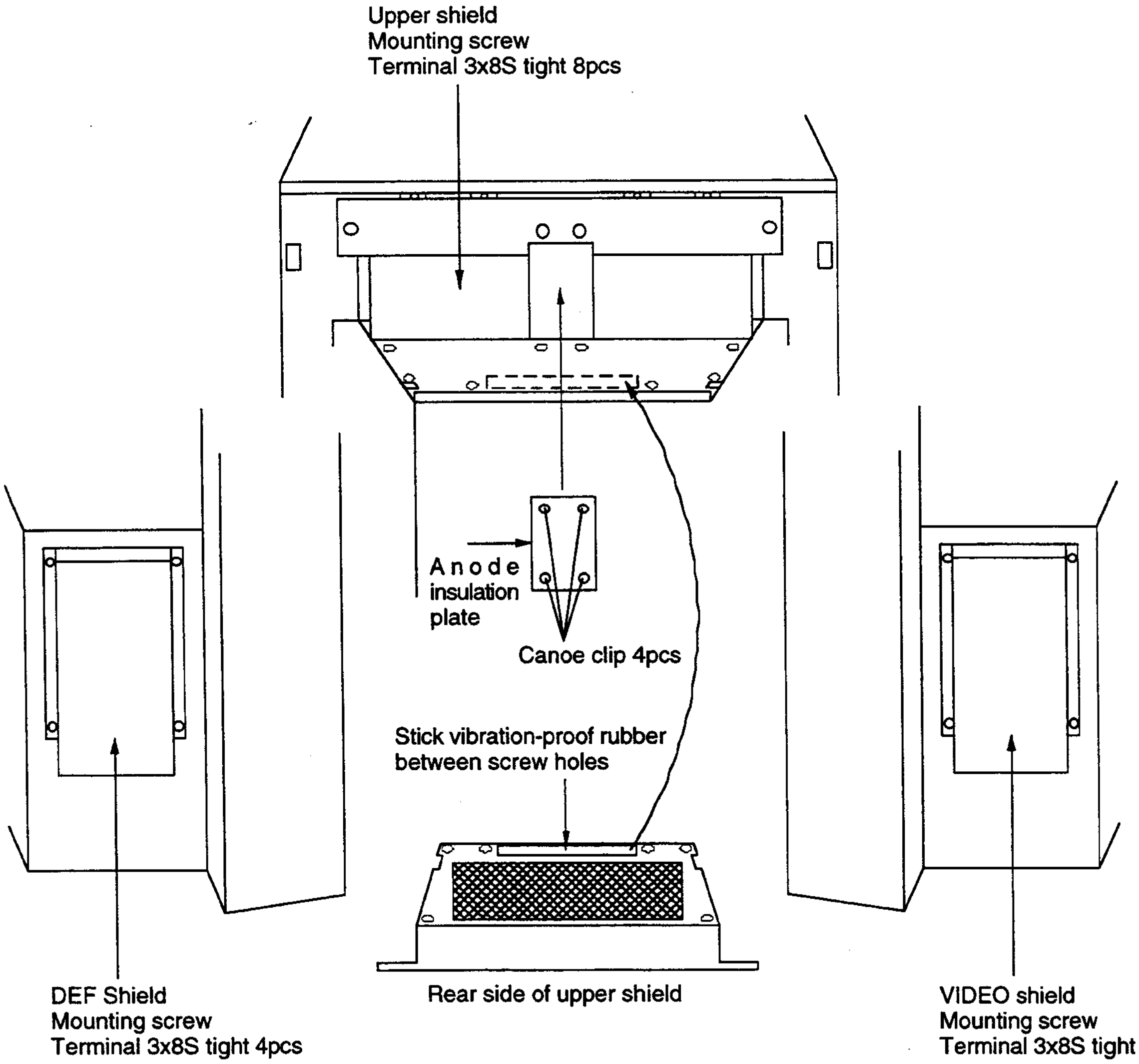

Thunder mark black
No. 720059
Unit caution label (HV)
No. 620053
CAUTION

Rear Assembly


Ⓐ
Ⓑ
Terminal 3x8S tight 2pcs
Handle reinforcement
Ⓒ
Ⓓ
Handle reinforcement
Terminal 3x8S tight 2pcs
Tightened together with VIDEO mount
Black bind M3x4 4pcs
Connector decorative panel


Ⓐ
Connect FAN 1 wire to WH50 CN008 that is proturded from FAN SENSE PWB. (Longer wire for WH50 and shorter one for WH51)
Rear plate Assy
FAN1
Terminal 3x8S tight 6pcs
Same on side Ⓑ
Ⓒ
Ⓑ
Terminal 3x8 tight 2pcs
Same on side Ⓓ
Rear shield (2) Assy
Ⓓ

Adhesion of Each Label


Upper shield
Mounting screw
Terminal 3x8S tight 8pcs
Anode insulation plate
Canoe clip 4pcs
Stick vibration-proof rubber between screw holes
DEF Shield
Mounting screw
Terminal 3x8S tight 4pcs
Rear side of upper shield
VIDEO shield
Mounting screw
Terminal 3x8S tight

P. SW Assembly

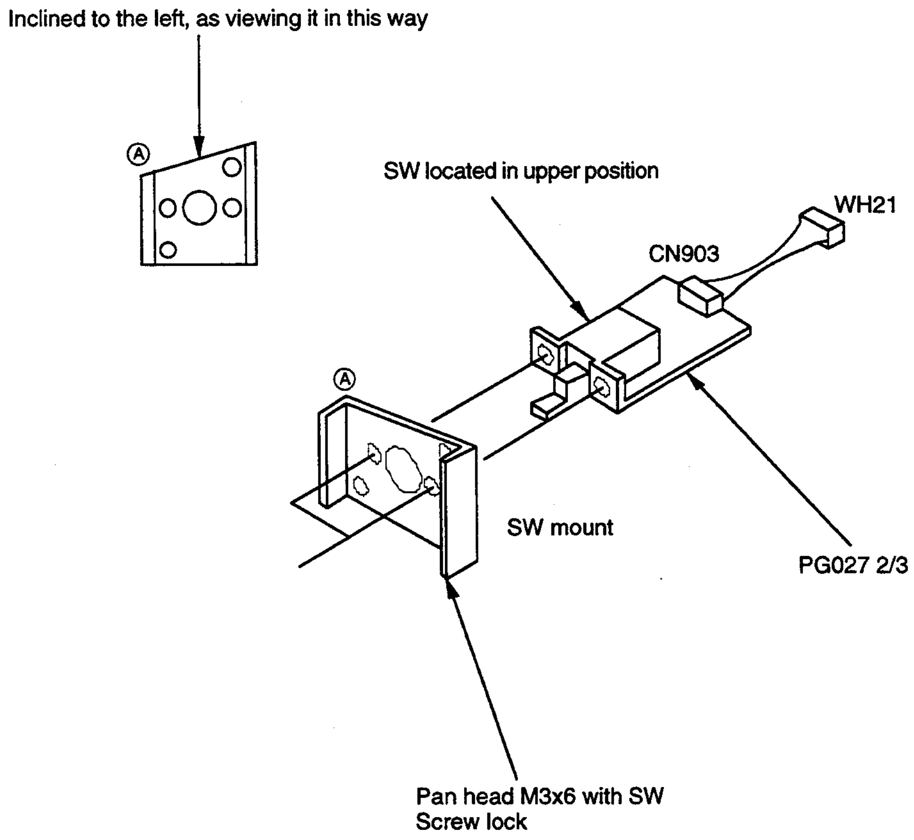
Working procedures

1. Mount P. SW and lock it with screws, as illustrated.

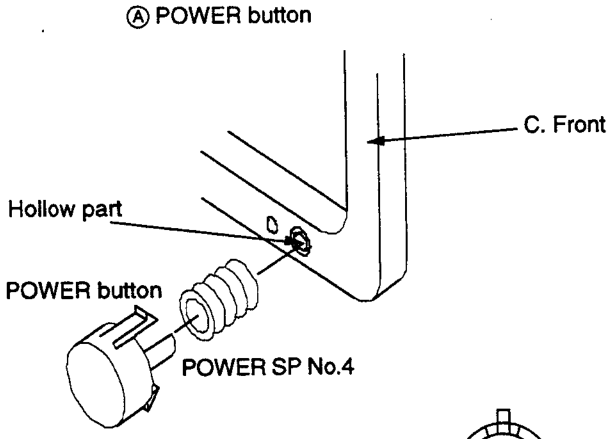
   Caution:

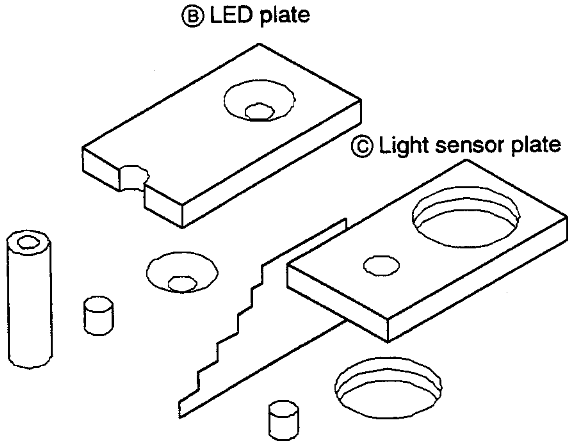
   - SW mounting install directivity. For POWER SW PWB also, mount SW in upper position, as illustrated.

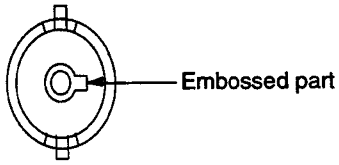
2. Mount WH21 on CN903.


Inclined to the left, as viewing it in this way
Ⓐ
SW located in upper position
WH21
CN903
Ⓐ
SW mount
PG027 2/3
Pan head M3x6 with SW
Screw lock

C. Front Processing 1


Ⓐ POWER button
C. Front
Hollow part
POWER button
POWER SP No.4

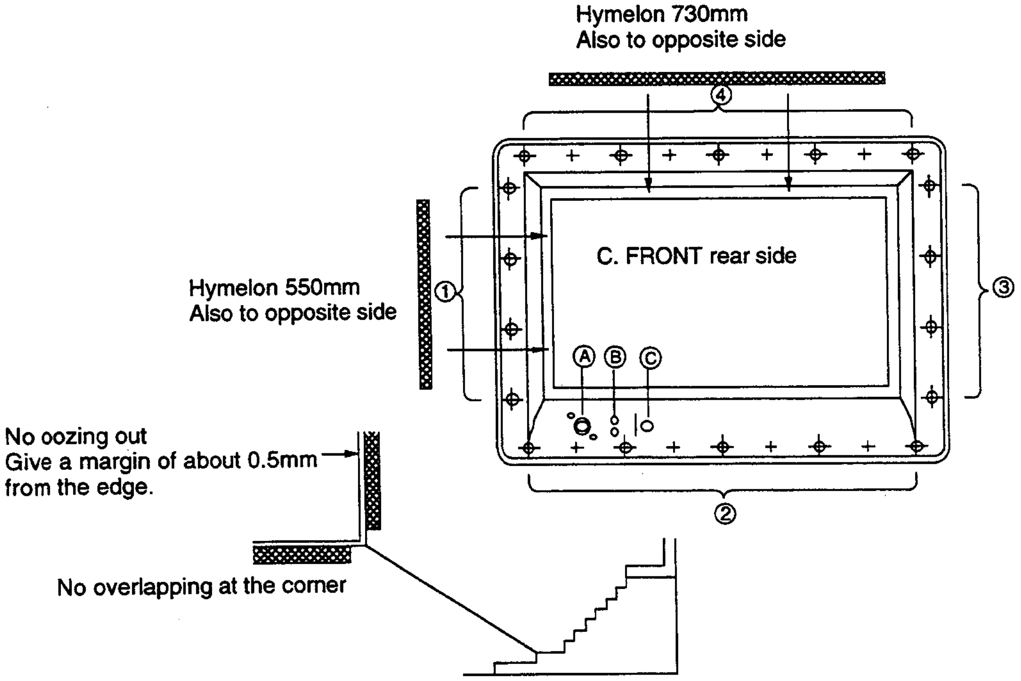

Ⓑ LED plate
Ⓒ Light sensor plate


Embossed part

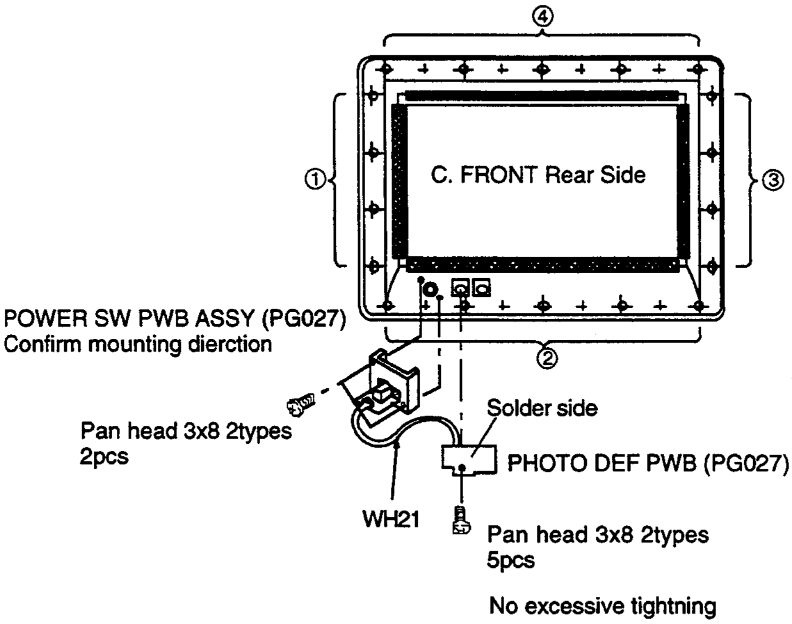
Join holes of Ⓑ and Ⓒ, fit them in, and apply adhesive (made by Henkel Hakusuisha) to their surroundings. Nothing shall be squeezed out to the outside.

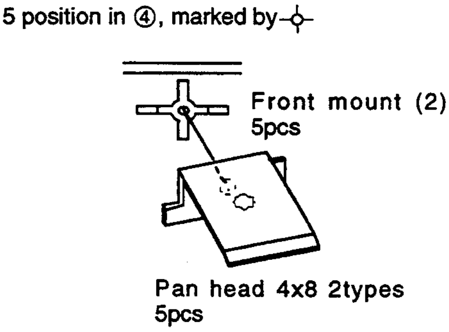
Ⓐ Join the hollow and embossed parts, insert a spring, and push them in until they are locked

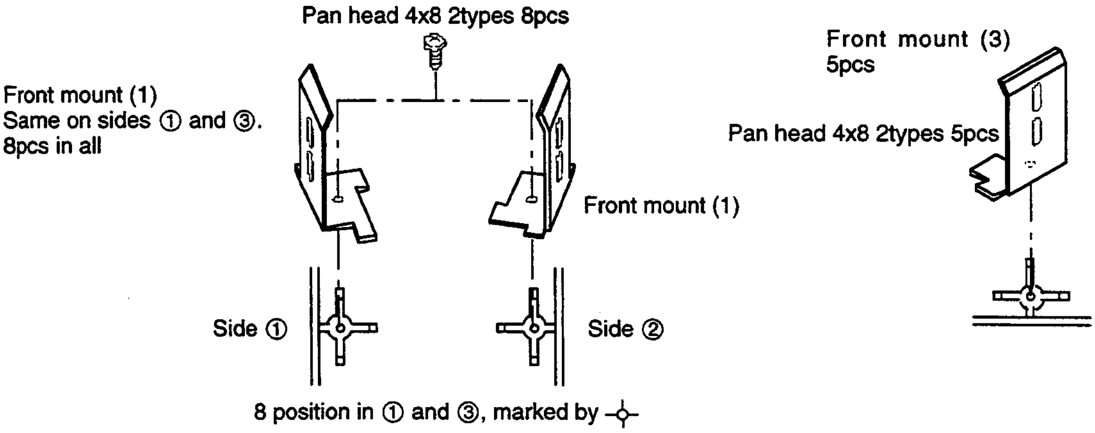
* Refer to the next page as for ①, ②, and ③.


Hymelon 730mm
Also to opposite side
④
C. FRONT rear side
Hymelon 550mm
Also to opposite side
①
②
③
Ⓐ Ⓑ Ⓒ
No oozing out
Give a margin of about 0.5mm from the edge.
No overlapping at the corner

C. Front Processing 2


④
①
C. FRONT Rear Side
③
②
POWER SW PWB ASSY (PG027)
Confirm mounting dierction
Pan head 3x8 2types
2pcs
Solder side
PHOTO DEF PWB (PG027)
WH21
Pan head 3x8 2types
5pcs
No excessive tightning


5 position in ④, marked by -⌖-
Front mount (2)
5pcs
Pan head 4x8 2types
5pcs


Pan head 4x8 2types 8pcs
Front mount (1)
Same on sides ① and ③.
8pcs in all
Front mount (1)
Side ①
Side ②
8 position in ① and ③, marked by -⌖-
Front mount (3)
5pcs
Pan head 4x8 2types 5pcs

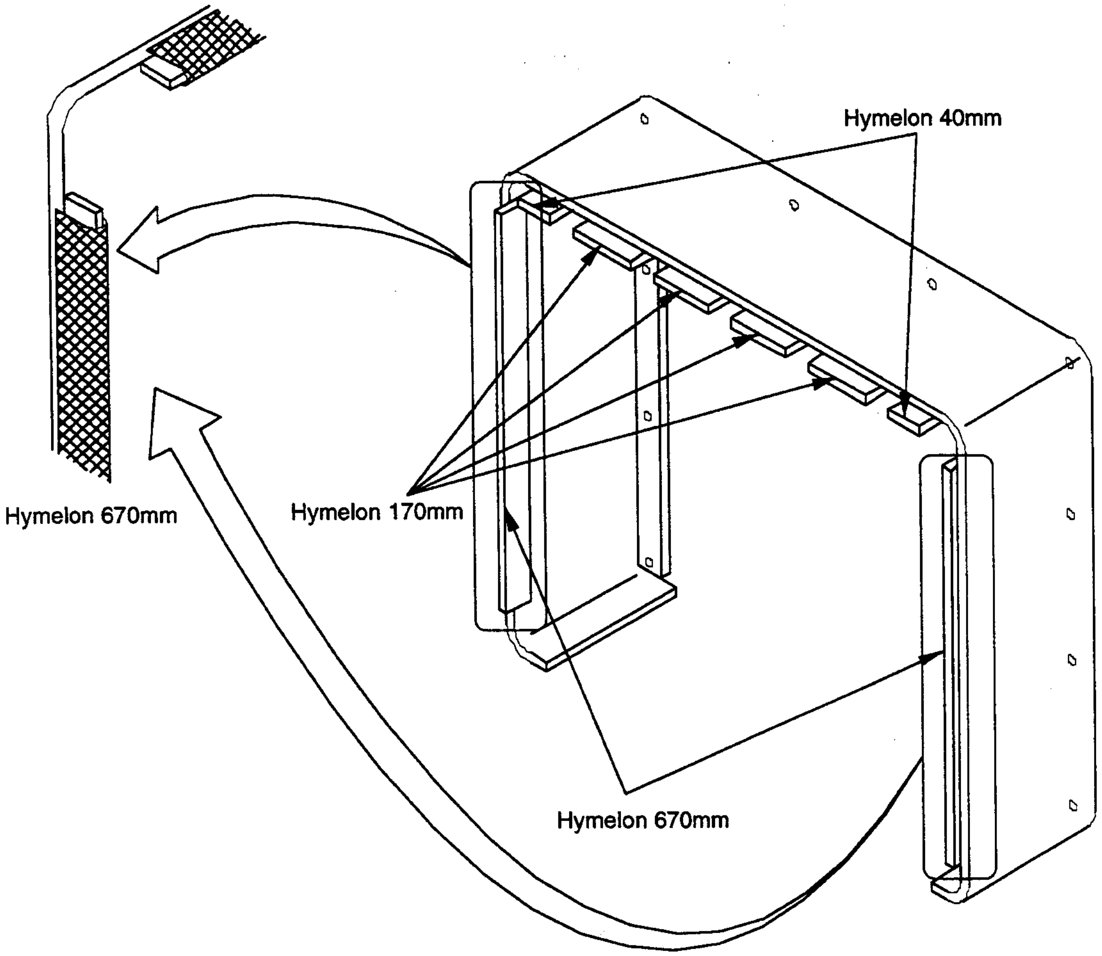
C. Center Processing

Working procedures

1. Stick Hymelons as illustrated.

   Caution:

   - Before adhesion of Hymelons, they shall be folded approximately in the middle.


Hymelon 40mm
Hymelon 670mm
Hymelon 170mm
Hymelon 670mm

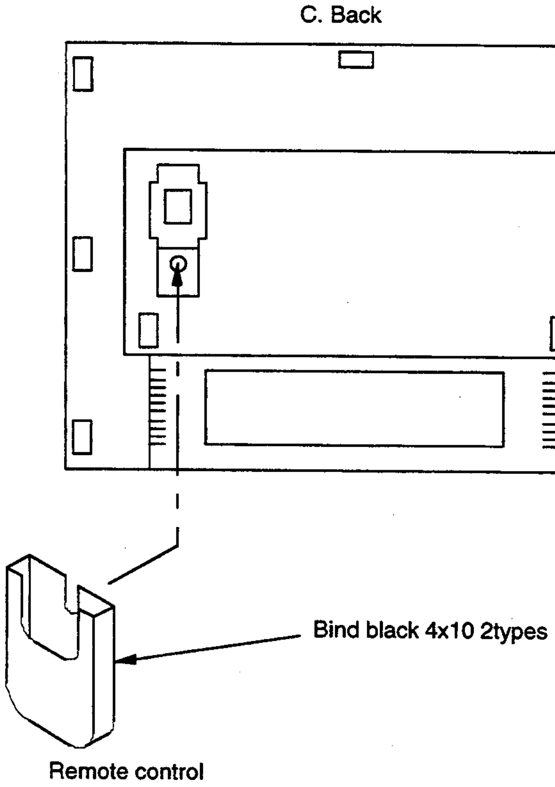
Remote Control Holder Mounting

Working procedures

1. Mount the remote control holder in position, as illustrated.

   Caution:

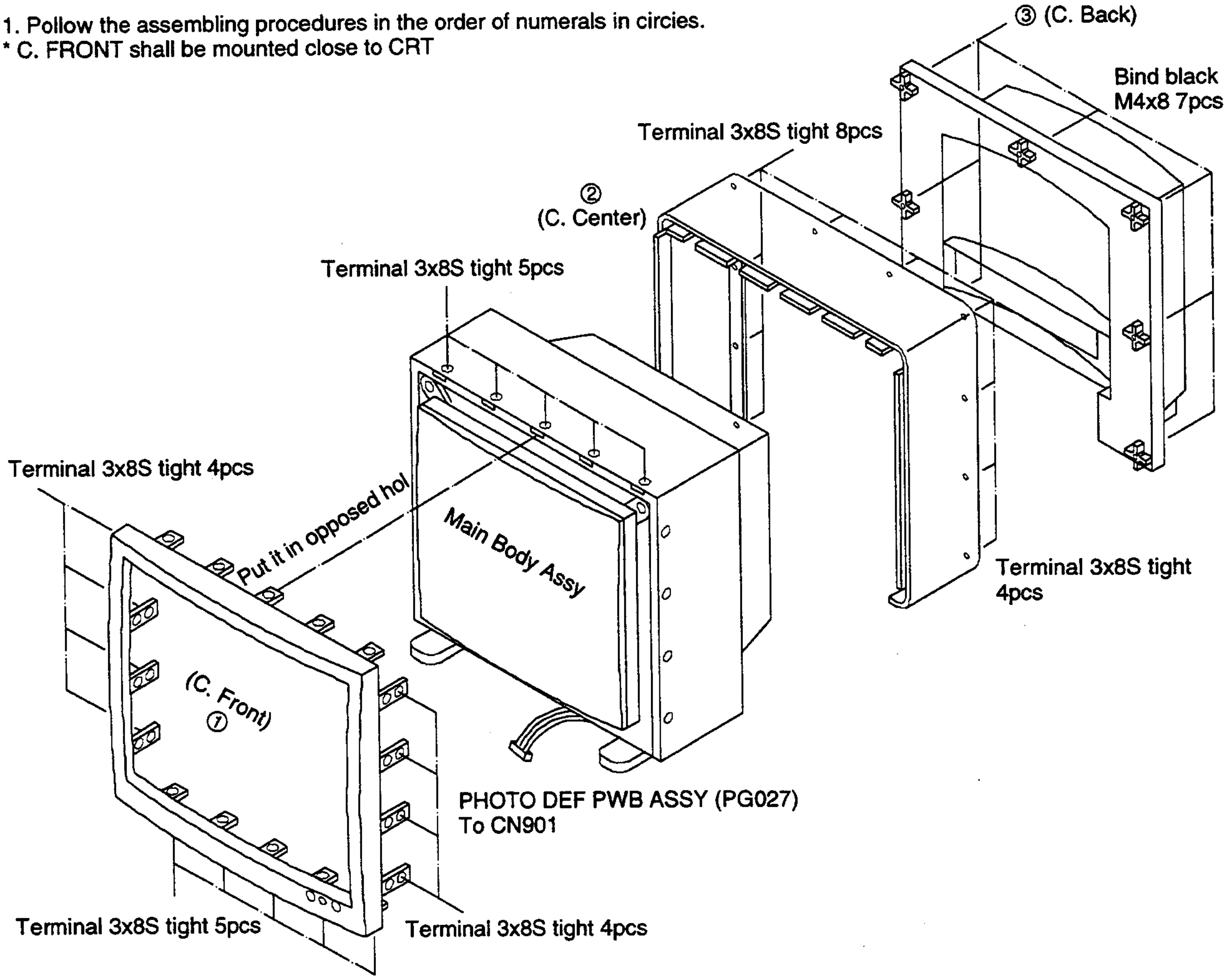
   - Make sure not to tighten it too much.


C. Back
Bind black 4x10 2types
Remote control

ASSEMBLING METHOD

Cabinet mounting

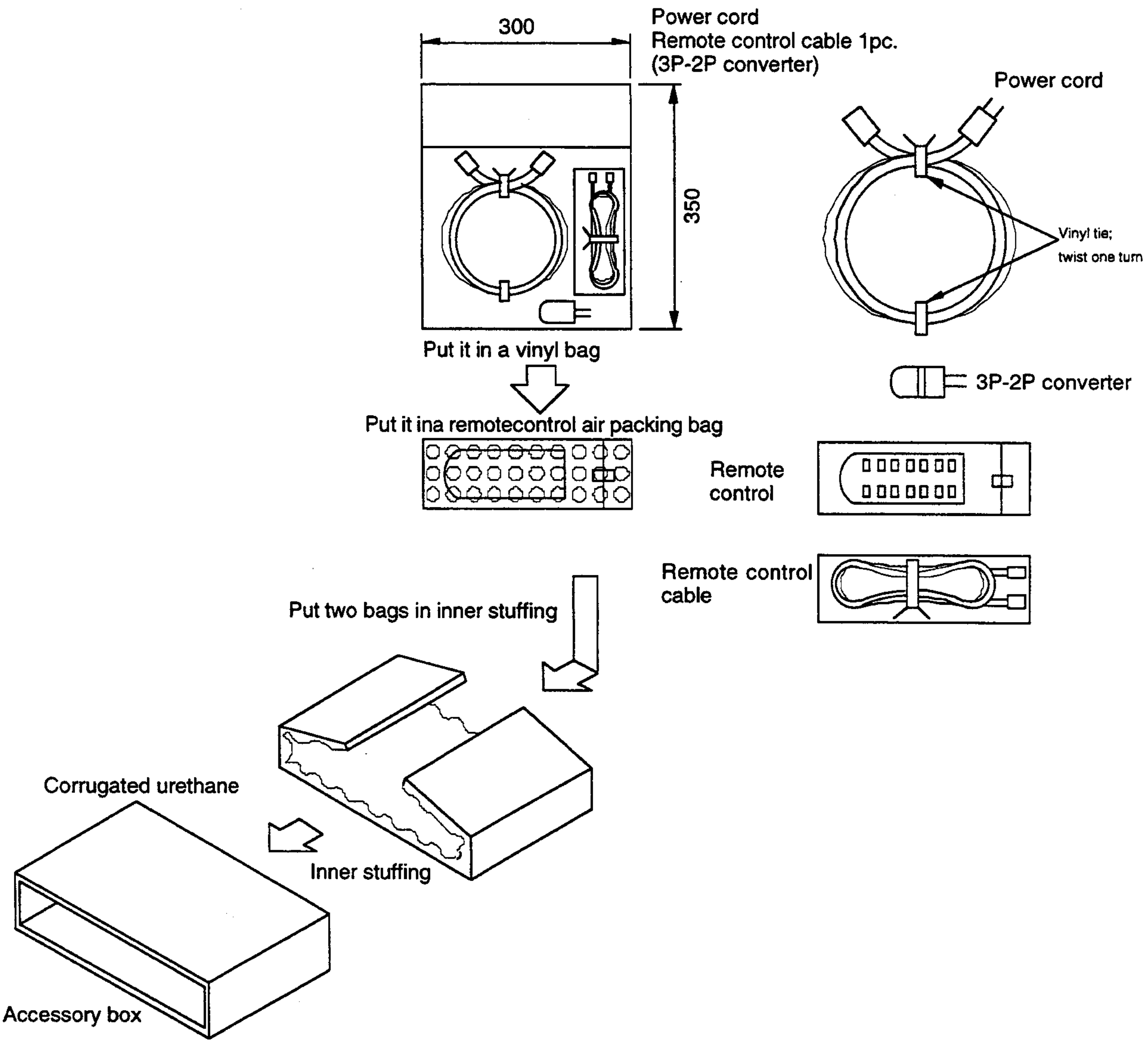
1. Pollow the assembling procedures in the order of numerals in circies.
* C. FRONT shall be mounted close to CRT


③ (C. Back)
Bind black M4x8 7pcs
Terminal 3x8S tight 8pcs
② (C. Center)
Terminal 3x8S tight 5pcs
Terminal 3x8S tight 4pcs
Put it in opposed hol
Main Body Assy
Terminal 3x8S tight 4pcs
(C. Front) ①
PHOTO DEF PWB ASSY (PG027) To CN901
Terminal 3x8S tight 5pcs
Terminal 3x8S tight 4pcs

Accessories

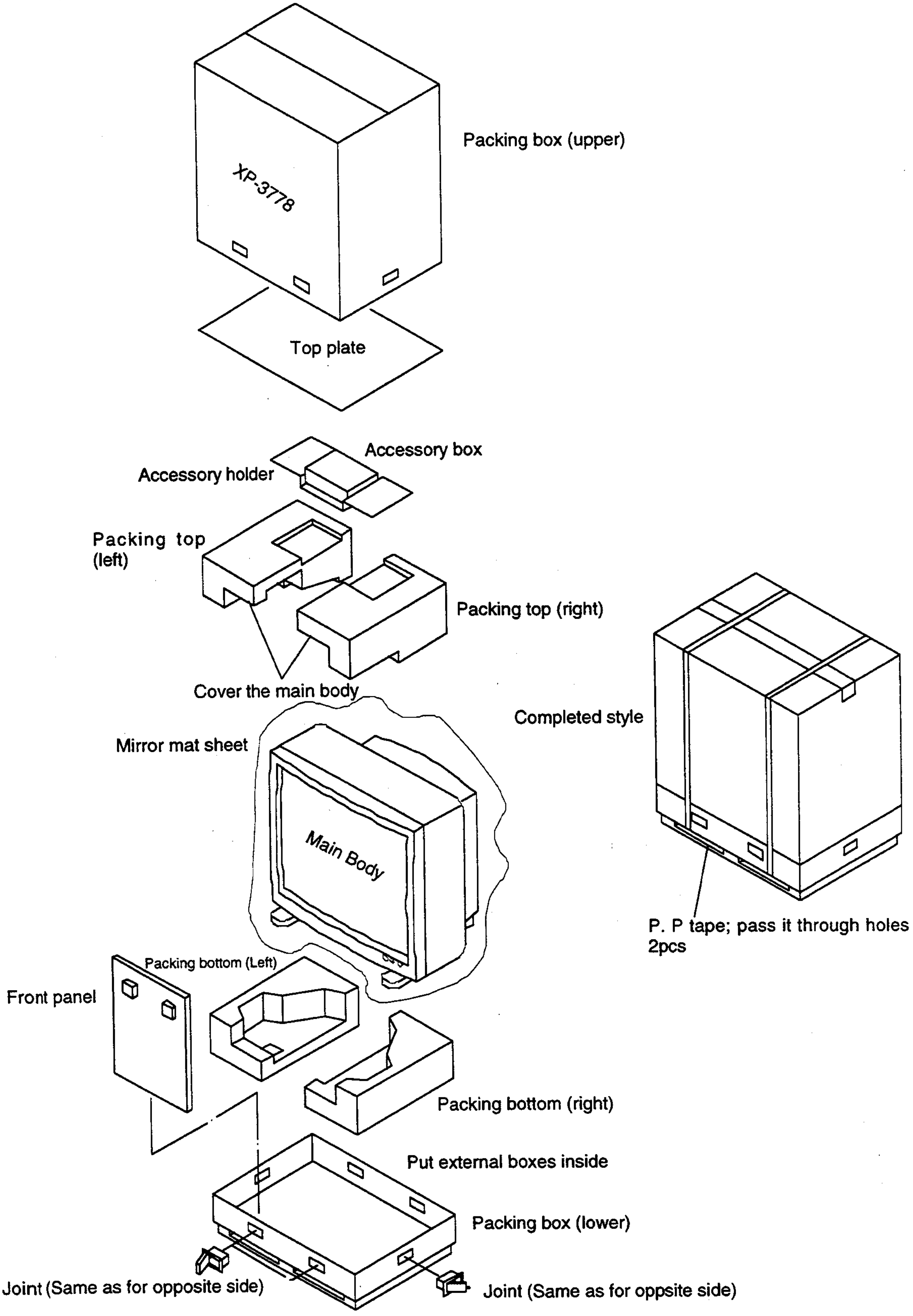
XP-3778, XM-3750
1. Power cord (VM0234-0089A, 2.5M) 1pc.
2. Remote control 1pc.
3. Remote control cable 1pc.

XP-3778G, XM-3750G
1. Power cord (VM0309B-0310B, 2.5M) 1pc.
2. Remote control 1pc.
3. Remote control cable 1pc.


300
Power cord
Remote control cable 1pc.
(3P-2P converter)
350
Power cord
Vinyl tie;
twist one turn
Put it in a vinyl bag
3P-2P converter
Put it ina remotecontrol air packing bag
Remote control
Remote control cable
Put two bags in inner stuffing
Corrugated urethane
Inner stuffing
Accessory box

ASSEMBLING METHOD

Packaging


Packing box (upper)
XP-3778
Top plate
Accessory box
Accessory holder
Packing top (left)
Packing top (right)
Cover the main body
Completed style
Mirror mat sheet
Main Body
P. P tape; pass it through holes 2pcs
Packing bottom (Left)
Front panel
Packing bottom (right)
Put external boxes inside
Packing box (lower)
Joint (Same as for opposite side)
Joint (Same as for oppsite side)

ADJUSTMENT METHOD

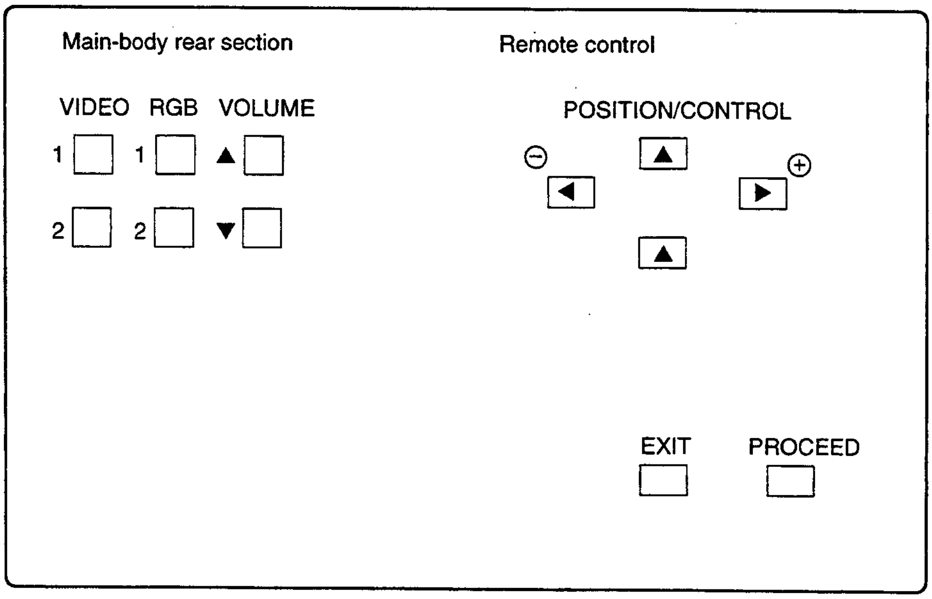
Factory setting mode selection

Parts and materials

Facilities and fixtures

Working procedures

1. Turn on POWER switch, pressing VIDEO 1 switch located behind the main body.
   Caution:
   - The unit can be energized with POWER switch of the remote control.
2. Press once PROCEED key of the remote control.
   Caution:
   - Never press it more than once.
3. Press once the upper part of POSITION/CONTROL key of the remote control (▲).
   Caution:
   - Never press it more than once.
     A red-framed on-screen (WARNING) indication is given.
     A red-framed on-screen (MAIN MENU) indication is given.
4. Press once again PROCEED key of the remote control.
   Caution:
   - This adjustment work is carried out in this factory shipment mode.


Main-body rear section
VIDEO
RGB
VOLUME
1
1
▲
2
2
▼
Remote control
POSITION/CONTROL
⊖
▲
⊕
◀
▶
▲
EXIT
PROCEED

H. PREQ Adjustments (Product Line Proceudures)

Parts and materials

Facilities and fixtures
Signal leader 1605

Working procedures

1. Feed an H; 80kHz frequency signal through the RGB input terminal.
   Caution:
   - PROG No. 1 of leader signal source timing
2. Select a service controls menu with a remote control and choose H. FREQ from the menu. Set the free-run frequency.
   Caution:
   - A SERVICE menu can be chosen only if the factory mode is selected.
3. After setting the free-run frequency, use EXIT key of the remote control and clear the on-screen menu.
   Caution:
   - If a signal is switched over to another with an on-screen indication remaining, contents of setting cannot be put in the memory. Clear the on-screen menu.
4. Change the input signal to signal of H; 24kHz.
   Caution:
   - PROG No. 38 of leader signal source timing (PC-98)
5. Set the free-run frequency of H; 24kHz by operation as per 2, above, and clear the on-screen menu after the completion of setting.
6. Change the signal back to H: 80kHz and confirm that the free-run frequency has correctly adjusted.
   Caution:
   - After adjustment of free-run frequency, free-run adjustments are not carried out any more even when input signal timing changes.

HV Adjustments

Parts and materials	**Facilities and fixtures**
Sealant KE40RTV	HV meter Model 139D

Working procedures

1. Turn VR1 and VR2 of PG085 fully to the left (in the direction of minimum).
   Caution:
   - VR1 HV PROT, VR2 HV ADJ
2. Enter a signal of H; 80kHz.
   Caution:
   - PROG. No. 1 (VESA 1280x1024)
3. Confirm that the high-voltage value with raster cutoff is 30.0 ± 0.5kV.
   Caution:
   - Decrease R83 when the level is lower than the standard.
     Increase R83 when the level is higher than the standard.
4. Turn VR2 to the right and adjust high voltage to 33.5kV.
5. Slowly turn VR1 to the right until the high-voltage protector begins to operate.
6. Turn off the power supply and turn VR2 to the left.
   Caution:
   - Turn it in the direction where high voltage lowers.
7. Turn on the power supply and slowly turn VR2 to the right to confirm that the high-voltage protector operates within the range of 33.5 ± 0.5kV. If the condition is acceptable, record them in the data sheet.
   Caution:
   - In case of NG, repeat procedure 4 and thereafter.
8. Turn off the power supply and turn VR2 to the left.
9. Turn on the power supply again, and turn VR2 to adjust high voltage to 31.5 ± 0.5V. Record the conditions in the data sheet.
10. After adjustment of high voltage and the protector, fix both VR1 and VR2 with KE40RTV.

ADJUSTMENT METHOD

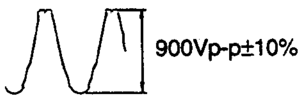
Dynamic Focus Adjustments

Parts and materials	**Facilities and fixtures**
	Oscilloscope 100: 1 probe

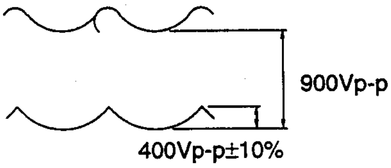
Working procedures

1. Select the factory setting mode.
2. Enter a signal of H; 31.5kHz
   Caution:
   - PROG No. 37 (INDUSTRY STANDARD 640 x 480)
3. Adjust both screen size and high voltage to 95%.
   Caution:
   - Obtain a specified screen size.
4. Use a 100:1 probe and check the waveform of DF OUT. (orange line) in PG085.
   Caution:
   - Parts mounting surface: Board IN terminal.
5. Using the remote control, select DYNAMIC FOCUS in the service menu, and make adjustments to the following: H: 900Vp-p, V: 400Vp-p.
   Caution:
   - The waveform will be degraded if the input signal frequency is too high.

H. DF waveform



V. DF waveform

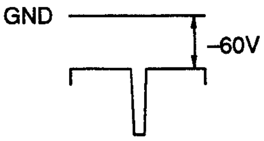


K BIAS Adjustments

Parts and materials	**Facilities and fixtures**
	Oscilloscope

Working procedures

1. Select the factory setting mode.
2. Check the G1 terminal of CRT SOCKET PWB (PG025), using an oscilloscope.
3. Select Kre Bias from the service menu, using a remote control, and adjust the waveform to DC-60V.

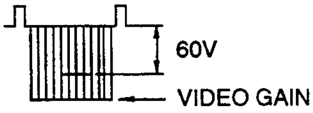


On-Screen Gain Adjustments

Parts and materials	**Facilities and fixtures**
	Oscilloscope

Working procedures

1. Select the factory setting mode.
2. Check the waveform of G OUT (TP2) of CRT SOCKET PWB (PG025).
3. Select OSM GAIN in the service menu, using a remote control, and adjust the on-screen gain to 60Vp-p.



System Adjustments

Parts and materials

Facilities and fixtures
Screen adjusting gauge
Signal source 1605 (leader)

Working procedures

1. Select the factory setting mode.
2. For two types of preset charts, make screen adjustments by entering RGB inputs.
   Caution:
   - Preset a total of 21 modes according to the preset chart PROG. No. 1, 7, 9, 13, 15, 16, 17, 19, 20, 21, 22, 25, 26, 28, 30, 31, 32 33, 36, 37, and 38.
3. Enter a signal input of PROG. 1 H; 80kHz and select H. Center in service mode, using the remote control. Adjust the raster to the center of the screen.
   Caution:
   - There is deviation in characteristics. Even when the adjusting level is unbalanced to the right (+) or left (–), such a condition is acceptable (if the image comes to the center).
4. Use the remote control and select position/size in the main menu. Adjust each position of height and width, respectively.
   Caution:
   - This adjustment is also possible with a direct key of the remote control.
5. Use the remote control and select GEOMETRY in the main menu. Adjust ROTATE, SIDE PIN, and ALIGN.
   Caution:
   - ROTATE should be free from extreme imbalance.
     Adjust SIDE PIN in a bobbin state (sag as NG).
6. Use the remote control to select Vertical Linearity in the main menu, and adjust the top and bottom linearity.
   Caution:
   - Move the position vertically and adjust it until the image center comes to almost coincide with the CRT's right and left center marks.
7. Examine H. Linearity and confirm if it conforms to the standard, using a picture frame.
   Caution:
   - There is no analog adjustment.
8. After adjustments, select OSM Location with the remote control and set the on-screen menu in the screen center.
9. After the completion of screen adjustments, clear the on-screen menu once and change the preset input to the next one. Make adjustments, according to the items of 3 to 8.
   Caution:
   - If a signal is switched over to another with an on-screen menu remaining, contents of any adjustments cannot be put in the memory.
   - Notes for size adjustments at the time of timing chart modification: Nos. 32, 37, 38 in the center of V. Size picture frame of RGOG. No. 16, and No. 33 H size over scan to the inside of V. size picture frame.

White Balance Adjustments

Parts and materials	**Facilities and fixtures**
	Oscilloscope Color analyzer CA-100

Working procedures

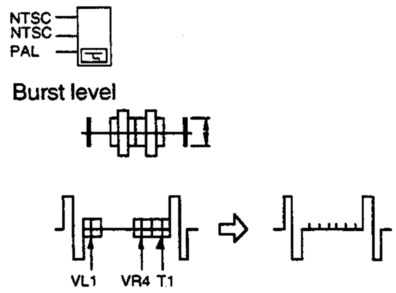
1. Select the factory setting mode.
2. Enter a signal input of H; 80kHz
   Caution:
   - Enter input in RGB2 channel (BNC input).
3. Use the remote control and set CONTRAST at MAX. and BRIGNTNESS at the center.
4. Use the remote control to select BIAS control, and check R OUT (TP1), G OUT (TP2), and B OUT (TP3), respectively. Adjust each to DC 130V
   Caution:
   - Since adjustments are based on GREEN, the level of G OUT (TP2) must be assuredly adjusted. (PG025 output level)
5. Use the remote control to select GAIN control, and check R OUT (TP1), G OUT (TP2), and B OUT (TP3), respectively. Adjust each to 120Vp-p.
   Caution:
   - Since adjustments are based on GREEN, the level of G OUT (TP2) must be assuredly adjusted. (PG025 output level)
6. Enter the gray scale of 16-step gradations and adjust the screen VR of FBT so that the second step from the lowest (darker side) is cut off.
7. Enter a 1/10 window signal. Use an analyzer and make adjustments to the following, using 30 cd/M^2 and 150 cd/M^2:
   X: 0.281 ± 0.005, Y: 0.285 ± 0.005
   Color temperature: 10500k
   To decrease error as minimal as possible, adjust the brightness several times vertically, using the contrast control.
8. After white balance adjustments, adjust the brightness of 1/10 window signal to 100 cd/M^2, using remote control contrast.
   Caution:
   - Since this value is preset, contrast must not be changed in the factory setting mode.
9. Using mini D-SUB, enter a 1/10 window signal of H; 80kHz in RGB1.
10. Change the input mode to RGB1 and set the brightness at the center, using the remote control.
11. Use the remote control to change the contrast and check the 1/10 window signal with an analyzer. Then make adjustments to 100 cd/M^2.
    Caution:
    - In the same manner as for RGB2, set the preset value at 100 cd/M^2.

VIDEO (PG082) Board Adjustments

Parts and materials	Facilities and fixtures
	Signal source 408NPS (leader) Oscilloscope

Working procedures

1. Select the factory setting mode.
2. Enter the PAL standard signal to the VIDEO input terminal.
   Caution:
   - Change the input SW to a lower position on the rear side of the main body.
3. Observe a signal at TP14 and adjust VR301 to obtain DC 2.5V.
   Caution:
   - (System clock frequency adjustment) "H" in the screen should be locked.
4. Adjust VR1 (CVR) so that the pedestal is maintained at DC 1.2V at pin No. 25 of IC1.
   Caution:
   - (Y/C clamp adjustments)
5. Put the input signal into PAL 100% color bars and check the Y level at TP1. Adjust VR2 (YVRF) to vs 0.82Vp-p.
6. Check the C level at TP6 and adjust VR3 (CVRF) until the burst level is maintained at 0.24Vp-p.
7. Enter an input signal of PAL's DEM pattern and adjust VL1, T1, and VR4 so that the line of the TP2 waveform becomes minimum.
   Caution:
   - This adjustment is effected with mutual effect from the three adjustment.
8. Change the input signal to PAL 75% color bars and adjust the color key until the waveform at TP2 is maintained at 0.5Vp-p, using the remote control.
9. Change the input signal to NTSC 75% color bars and examine the waveform at TP2. Adjust VR6 so that the waveform is maintained at 0.5Vp-p.
   Caution:
   - Change the input SW to the upper position on the rear side of the main body.
10. Use the remote control and move the variable position of TINT to the center.
11. Check the signal at TP17 and adjust VC1 until a proper hue is obtained.
    Caution:
    - Make fine adjustments with VL1 if an adequate hue cannot be obtained.
12. Check the signal at TP3 and adjust VR5 until the waveform is maintained at 0.5Vp-p.



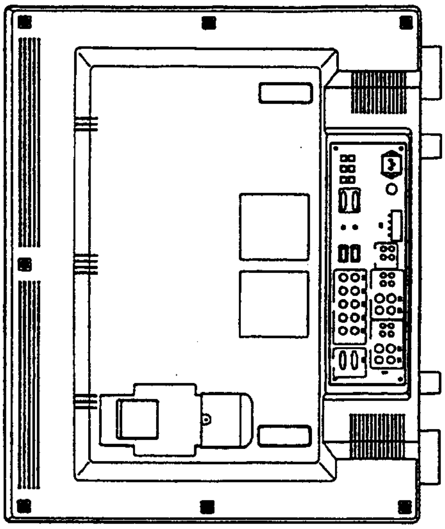
VIDEO Adjustments

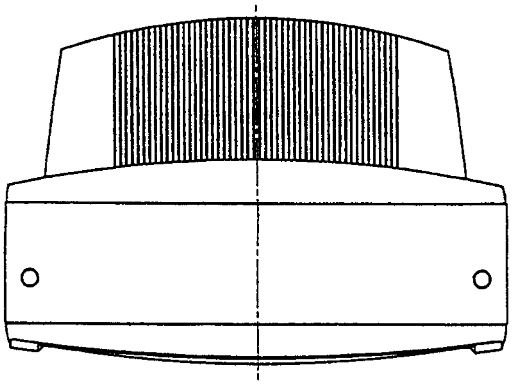
Parts and materials	**Facilities and fixtures**
	Crosshatch signal 408NPS Oscilloscope

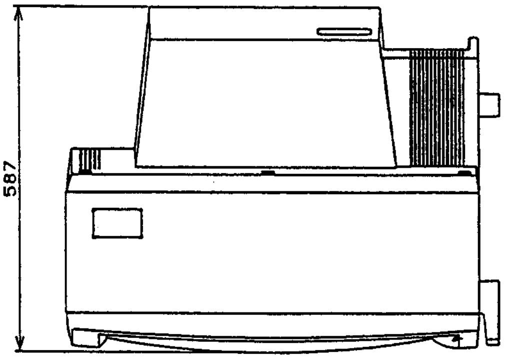
Working procedures

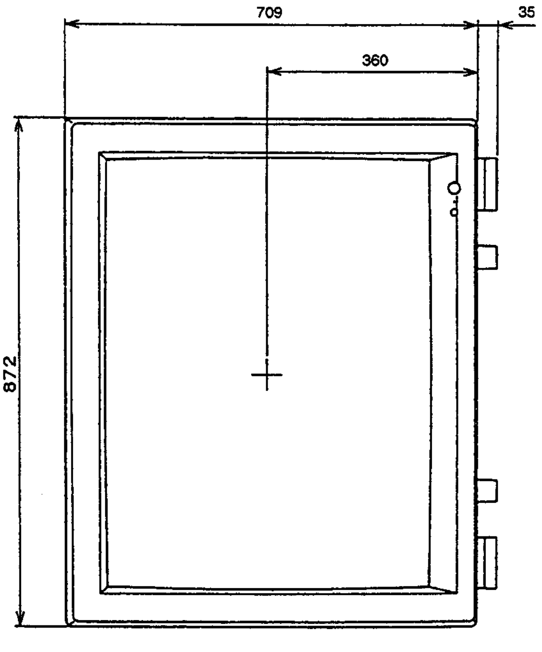
1. Select the factory setting mode.
2. After PG082 adjustments, enter an NTSC crosshatch signal to VIDEO 1 input.
   Caution:
   - Move the rear switch to the NTSC side.
3. Make various screen adjustments, such as H. center, H. POS, V. POS, V. LIN, SIDE PIN, Alignment, Size, Rotation, etc.
   Caution:
   - There should be no extreme imbalance in H/V. Size 107& over-scan, and Rotation.
4. Enter "grid + marker' signal from signal source 408NPS and check PG025 G OUT (TP2). Adjust contrast of remote control so that the marker section gains 90Vp-p.
5. Using BRIGHTNESS of the remote control, adjust the setting to the center position.
6. Enter NTSC 75% color bars. Check PG025 B OUT (TP3) and adjust COLOR and TINT of the remote control.
7. Adjust SHARPNESS of the remote control, and make adjustments to the center position.
8. Change the input signal to PAL monoscope.
   Make screen adjustments in the same manner as for NTSC.
9. Enter NTSC and PAL signals to VIDEO 2 input and make adjustments in the same manner as for item 2 to 8 above.
   Caution:
   - This is because the 107% overscan VIDEO 1/2 memory is different for both Size H and Size V.

OUTSIDE DIMENSION







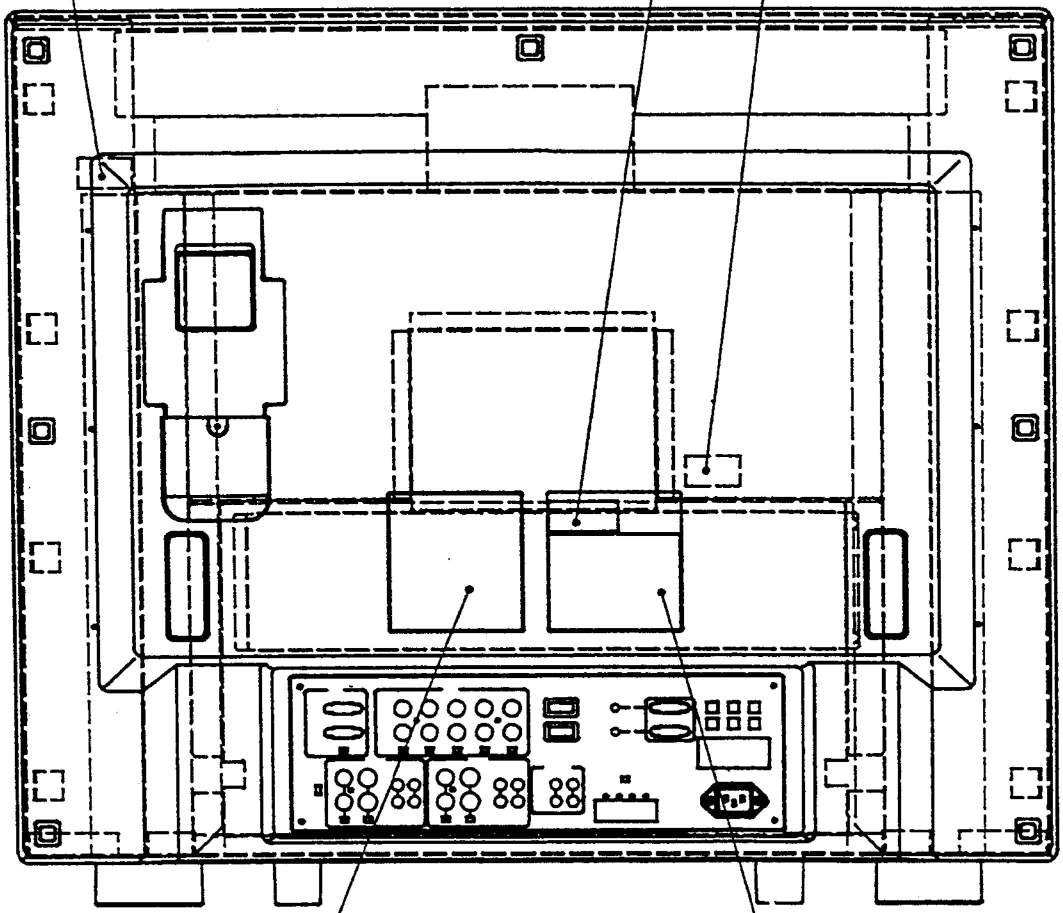

709
35
360
872

LABEL ADHESION DRAWING

Serial number label
79TH0853 (XM-3750/XP3778)
79TH0835 (XM-3750G/XP3778G)

Unit caution label (79TH0859)
(Stick to the right-side plate (Front))

Issue number label (79TH0860)
(Stick to the rear plate)

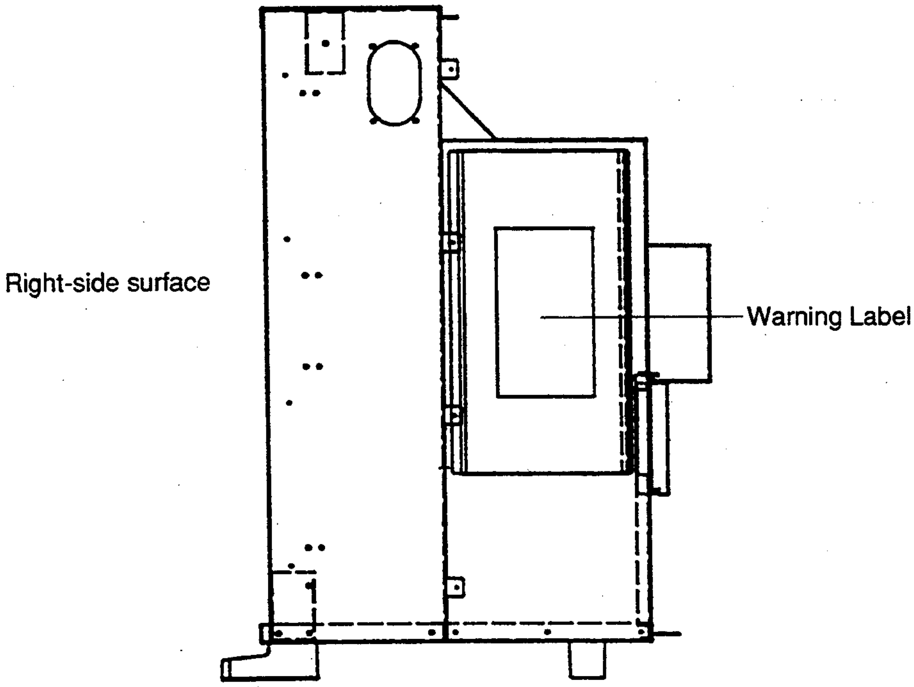


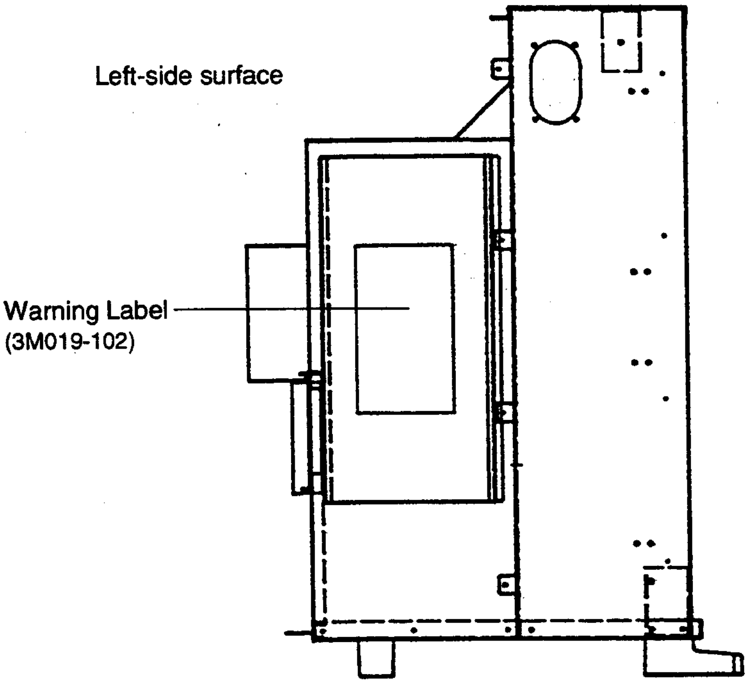
Rear nameplate
79TH0858 (XM3750)
79TH0852 (XP-3778)
79TH0854 (XM-3750G)
79TH0857 (XP-3778G)

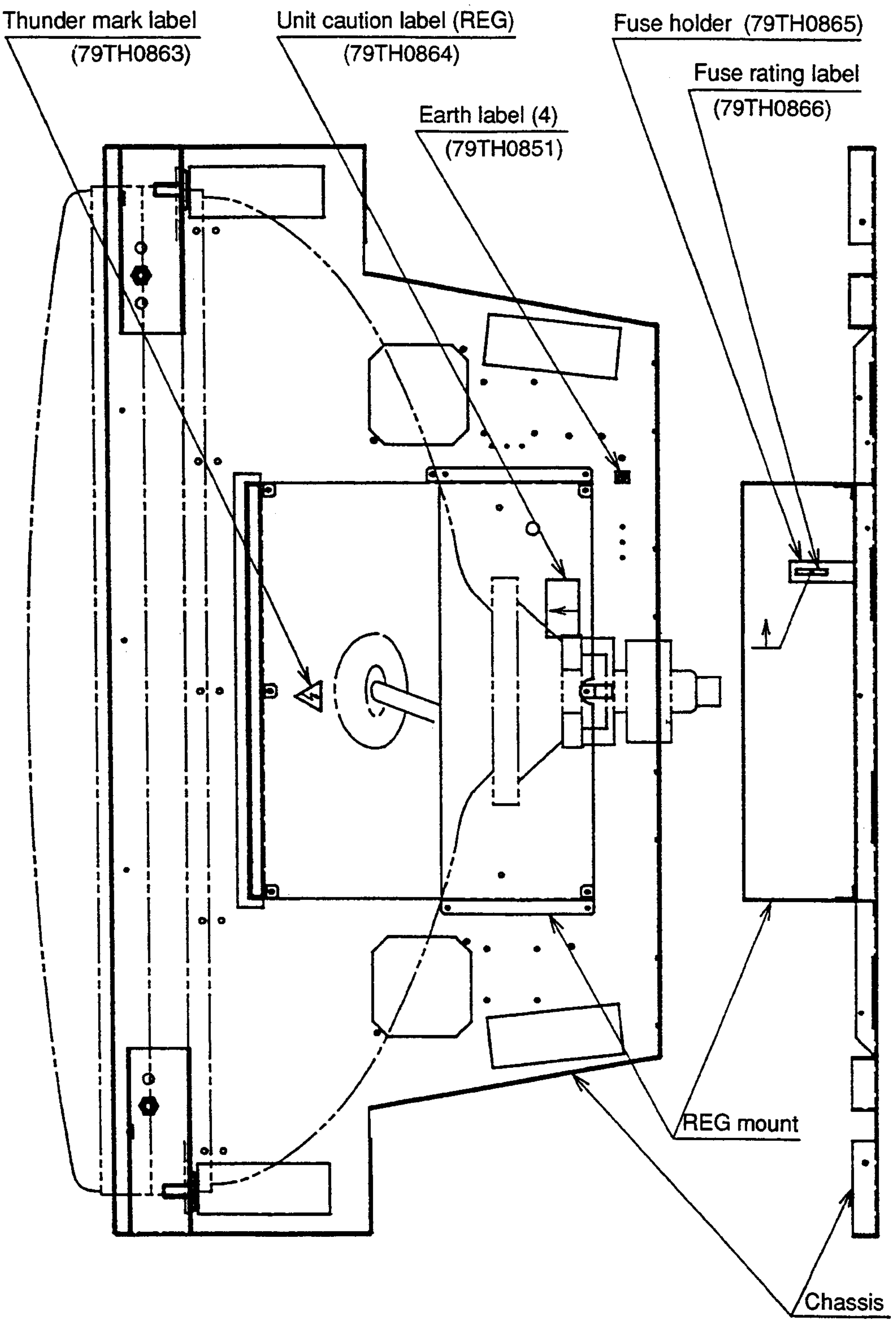
DIP SW label (79TH0862)

REAR SURFACE

LABEL ADHESION DRAWING

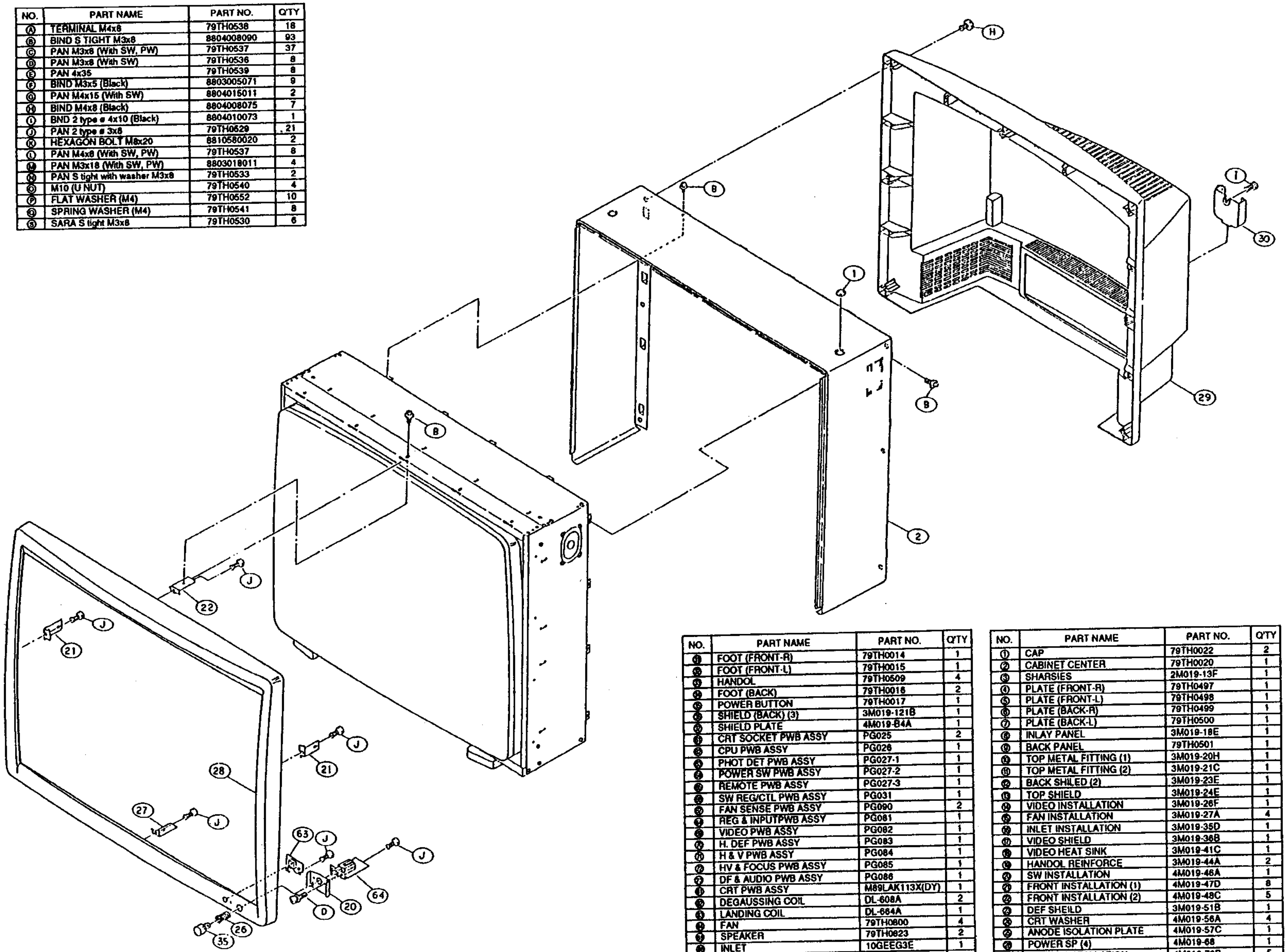

Right-side surface
Warning Label


Left-side surface
Warning Label
(3M019-102)


Thunder mark label
(79TH0863)
Unit caution label (REG)
(79TH0864)
Fuse holder (79TH0865)
Fuse rating label
(79TH0866)
Earth label (4)
(79TH0851)
REG mount
Chassis

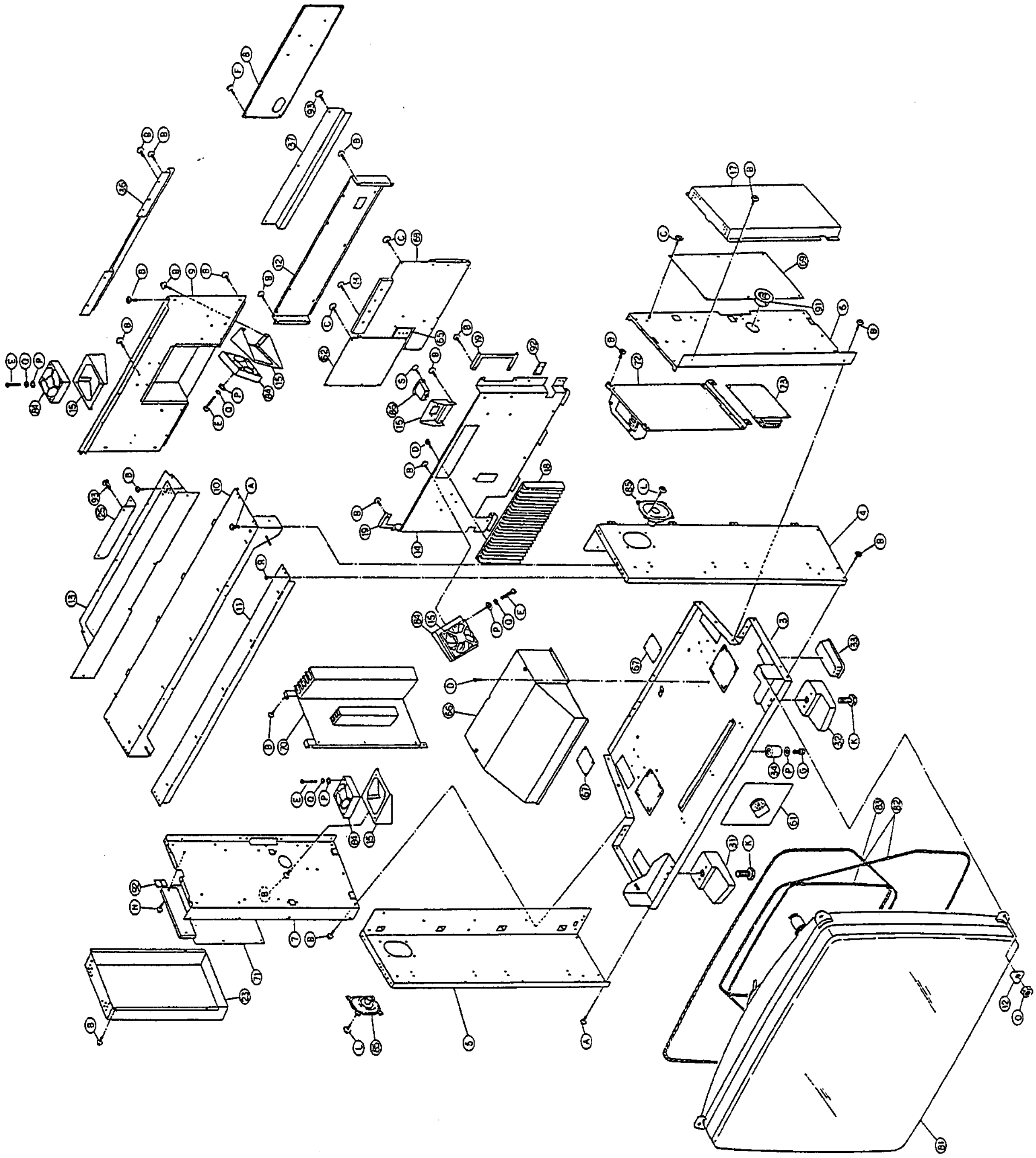
DISASSEMBLY

NO.	PART NAME	PART NO.	Q'TY
Ⓐ	TERMINAL M4x8	79TH0538	18
Ⓑ	BIND S TIGHT M3x8	8804008090	93
Ⓒ	PAN M3x8 (With SW, PW)	79TH0537	37
Ⓓ	PAN M3x8 (With SW)	79TH0536	8
Ⓔ	PAN 4x35	79TH0539	8
Ⓕ	BIND M3x5 (Black)	8803005071	9
Ⓖ	PAN M4x15 (With SW)	8804015011	2
Ⓗ	BIND M4x8 (Black)	8804008075	7
Ⓘ	BND 2 type ø 4x10 (Black)	8804010073	1
Ⓙ	PAN 2 type ø 3x8	79TH0529	. 21
Ⓚ	HEXAGON BOLT M8x20	8810580020	2
Ⓛ	PAN M4x8 (With SW, PW)	79TH0537	8
Ⓜ	PAN M3x18 (With SW, PW)	8803018011	4
Ⓝ	PAN S tight with washer M3x8	79TH0533	2
Ⓞ	M10 (U NUT)	79TH0540	4
Ⓟ	FLAT WASHER (M4)	79TH0552	10
Ⓠ	SPRING WASHER (M4)	79TH0541	8
Ⓢ	SARA S tight M3x8	79TH0530	6

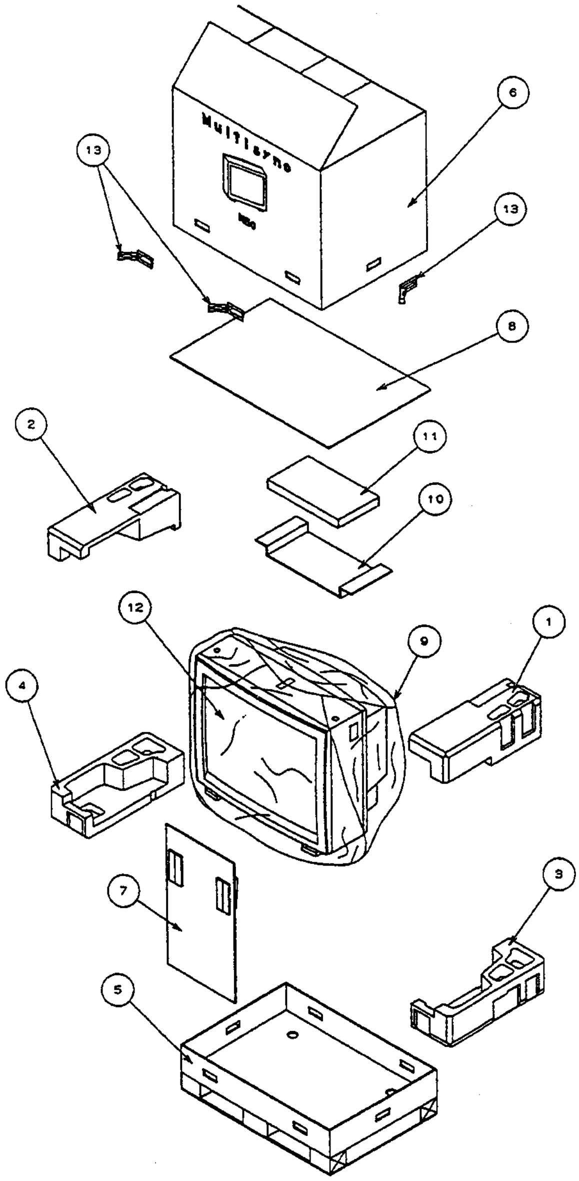


NO.	PART NAME	PART NO.	Q'TY
㉛	FOOT (FRONT-R)	79TH0014	1
㉜	FOOT (FRONT-L)	79TH0015	1
㉝	HANDOL	79TH0509	4
㉞	FOOT (BACK)	79TH0016	2
㉟	POWER BUTTON	79TH0017	1
㊱	SHIELD (BACK) (3)	3M019-121B	1
㊲	SHIELD PLATE	4M019-B4A	1
(61)	CRT SOCKET PWB ASSY	PG025	2
(62)	CPU PWB ASSY	PG026	1
(63)	PHOT DET PWB ASSY	PG027-1	1
(64)	POWER SW PWB ASSY	PG027-2	1
(65)	REMOTE PWB ASSY	PG027-3	1
(66)	SW REG/CTL PWB ASSY	PG031	1
(67)	FAN SENSE PWB ASSY	PG090	2
(68)	REG & INPUTPWB ASSY	PG081	1
(69)	VIDEO PWB ASSY	PG082	1
(70)	H. DEF PWB ASSY	PG083	1
(71)	H & V PWB ASSY	PG084	1
(72)	HV & FOCUS PWB ASSY	PG085	1
(73)	DF & AUDIO PWB ASSY	PG086	1
(81)	CRT PWB ASSY	M89LAK113X(DY)	1
(82)	DEGAUSSING COIL	DL-608A	2
(83)	LANDING COIL	DL-664A	1
(84)	FAN	79TH0800	4
(85)	SPEAKER	79TH0823	2
(86)	INLET	10GEEG3E	1
(91)	SNAP BUSHING	SB-1500-21	2
(92)	EDGE HOLDER	EH-180U	3
(93)	CANUE CLIP	TL-180	7

NO.	PART NAME	PART NO.	Q'TY
①	CAP	79TH0022	2
②	CABINET CENTER	79TH0020	1
③	SHARSIES	2M019-13F	1
④	PLATE (FRONT-R)	79TH0497	1
⑤	PLATE (FRONT-L)	79TH0498	1
⑥	PLATE (BACK-R)	79TH0499	1
⑦	PLATE (BACK-L)	79TH0500	1
⑧	INLAY PANEL	3M019-18E	1
⑨	BACK PANEL	79TH0501	1
⑩	TOP METAL FITTING (1)	3M019-20H	1
⑪	TOP METAL FITTING (2)	3M019-21C	1
⑫	BACK SHILED (2)	3M019-23E	1
⑬	TOP SHIELD	3M019-24E	1
⑭	VIDEO INSTALLATION	3M019-26F	1
⑮	FAN INSTALLATION	3M019-27A	4
⑯	INLET INSTALLATION	3M019-35D	1
⑰	VIDEO SHIELD	3M019-36B	1
⑱	VIDEO HEAT SINK	3M019-41C	1
⑲	HANDOL REINFORCE	3M019-44A	2
⑳	SW INSTALLATION	4M019-46A	1
㉑	FRONT INSTALLATION (1)	4M019-47D	8
㉒	FRONT INSTALLATION (2)	4M019-48C	5
㉓	DEF SHEILD	3M019-51B	1
㉔	CRT WASHER	4M019-56A	4
㉕	ANODE ISOLATION PLATE	4M019-57C	1
㉖	POWER SP (4)	4M019-68	1
㉗	FRONT INSTALLATION	4M019-78B	5
㉘	CABINET FRONT	79TH0630	1
㉙	CABINET BACK	79TH0012	1
㉚	HOLDER REMOCON	79TH0013	1



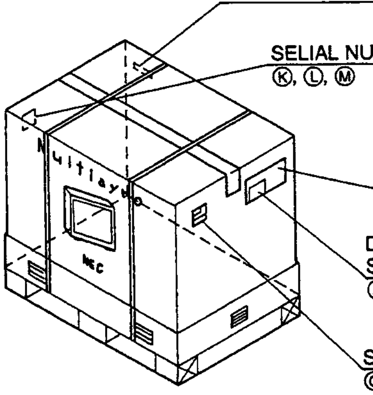
PACKAGING



NO.	PART NAME	PART No.	Q'TY
①	PACKIN (TOP-R)	79TH0512	1
②	PACKIN (TOP-R)	79TH0513	1
③	PACKIN (BOTTOM-R)	79TH0514	1
④	PACKIN (BOTTOM-L)	79TH0515	1
⑤	CARTON BOX (BOTTOM)	79TH0832 (XM-3750/XP-3778) 79TH0837 (XM-3750G/XP-3778G)	1
⑥	CARTON BOX (TOP)	79TH0831 (XM-3750) 79TH0833 (XP-3778) 79TH0838 (XM-3750G) 79TH0836 (XP-3778G)	1
⑦	FRONT PANEL	79TH0518	1
⑧	TOP PANEL	79TH0519	1
⑨	SHEET (2500x2500mm)	79TH0520	1
⑩	ACCESSORY HOLDER PLATE	79TH0521	1
⑪	ACCESSORY BOX	79TH0523	1
⑫	MONITOR		1
⑬	PACAGING JOINT	79TH0867	6

⑪ ACCESSORY BOX

PART NAME	PAR No.	Q'TY
REM-T HAND UNIT (RD-336E)	79TH0543	1
REMOCON CABLE (4m)	79TH0868	1
BATTERY (SUM3)	69011007	2
POWER CORD	79TH0542	1
USER'S MANUAL	79TH0023 (XM-3750/XP-3778) 79TH0025 (XM-3750G/XP-3778G)	1
RESISTRATION CARD MM (P/No. 78036581)	78036581	1
ACCESSORY CUSHION	79TH0522	1
AIR PACKIN BAG (140x300mm)	79TH0869	1
PE BAG (t 0.05x300x350mm)	79TH0870	2



BARCODE LABEL 79TH0856 (XM-3750/XP-3778)
79TH0547 (XM-3750G/XP-3778G)

SELIAL NUMBER. LABEL (No. 920011) 79TH0853 (XM-3750/XP-3778)
Ⓚ, Ⓛ, Ⓜ 79TH0835 (XM-3750G/XP-3778G)

PE BAG (t 0.04x100x250mm)
(79TH0861)

DHHS CARD (24L29491)
SELIAL NUMBER. LABEL (No. 920011) 79TH0853 (XM-3750/XP-3778)
Ⓐ, Ⓑ, Ⓒ, Ⓓ 79TH0835 (XM-3750G/XP-3778G)

SELIAL NUMBER. LABEL (No. 920011) 79TH0853 (XM-3750/XP-3778)
Ⓖ, Ⓗ, Ⓘ 79TH0835 (XM-3750G/XP-3778G)

REPLACEMENT PARTS LIST

Notes:

1. Parts orders must contain model name, parts number and description.
2. When you place an order for spare parts, please refer to the respective service manual and mention the right parts number on your P.O. Sheets.
3. Standard resistors, capacitors and coils which are normally available from local electronics suppliers are not stocked in our warehouse.
4. The components identitied by a ⚠mark or with the symbol Nos. shaded are critical for safety. Replace only with parts number specitied.

XP-3750

SYMBOL	PARTS NO	DESCRIPTION
*** ICS ***		
	370E8016	IC UPC1861GR-T2
	37074324	MOS 24LC21-I/P (E-EPROM)
A001	37058707	MOS TMP87PK42N (CPU)
A002	371E1514	IC PST529D-2(T)(VOLTAGE D
ICA001	79TH0729	IC LA7016
ICA002	79TH0729	IC LA7016
ICA003	79TH0729	IC LA7016
ICA004	79TH0729	IC LA7016
ICA005	79TH0729	IC LA7016
ICA006	79TH0729	IC LA7016
ICA007	79TH0722	IC M52321SP
⚠ICA008	79TH0730	IC VPH 05
⚠ICA009	79TH0730	IC VPH 05
⚠ICA010	79TH0730	IC VPH 05
ICA011	79TH0737	IC MOS UPD4053BC
ICA012	79TH0731	IC NJM319D
ICA013	79TH0737	IC MOS UPD4053BC
ICA014	79TH0721	IC M52036SP
ICA015	79TH0723	IC M35020SP
ICA016	79TH0724	IC M35042-050SP
ICA017	79TH0439	IC NJM2902N
ICA018	79TH0437	IC NJM78M12A
ICA020	79TH0437	IC NJM78M12A
ICA022	79TH0739	IC MOS HD74HC02P
ICA023	79TH0740	IC MOS HD74HC221P
ICA301	79TH0732	IC NJM2234L
ICA302	79TH0732	IC NJM2234L
ICA303	79TH0732	IC NJM2234L
ICA304	79TH0738	IC MOS UPD4052BC
ICB001	79TH0754	IC MOS M5M80C85AFP2D7
ICB002	79TH0764	IC M51943BML-600D
ICB003	79TH0749	IC MOS HD74HC373FP-ER
ICB004	79TH0735	IC MOS M27C256B-15XF1
ICB005	79TH0753	IC MOS LH5116NA-10-E2
ICB006	79TH0752	IC MOS HN58C65RFP25-TZ
ICB007	79TH0745	IC MOS HD74HC32FP-ER
ICB008	79TH0743	IC MOS HD74HC04FP-ER
ICB009	79TH0747	IC MOS HD74HC138FP-ER
ICB010	79TH0745	IC MOS HD74HC32FP-ER
ICB011	79TH0757	IC MOS M5M82C54FP-T4
ICB012	79TH0757	IC MOS M5M82C54FP-T4
ICB013	79TH0756	IC MOS M5M82C54FP-T4
ICB014	79TH0746	IC MOS HD74HC123AFP-ER
ICB015	79TH0755	IC MOS M5M82C55AFP2T4
ICB016	79TH0755	IC MOS M5M82C55AFP2T4
ICB017	79TH0755	IC MOS M5M82C55AFP2T4
ICB018	79TH0759	IC MOS M62352FP-75NC
ICB019	79TH0759	IC MOS M62352FP-75NC
ICB020	79TH0760	IC MOS M62354FP-70ND
ICB021	79TH0748	IC MOS HD74HC148FP-ER
ICB022	79TH0750	IC MOS HD74HC4040FP-ER
ICB023	79TH0743	IC MOS HD74HC04FP-ER
ICB024	79TH0744	IC MOS HD74HC08FP-ER
ICB025	79TH0765	IC MOS UPC1093T-E1
ICB026	79TH0761	IC MOS NJU8102KM-T1
ICB027	79TH0762	IC NJM2902M-TE1
ICB028	79TH0455	IC NJM2904M-TE3
ICB029	79TH0758	IC MOS UPD4713GT-T1
ICB030	79TH0452	MOS UPD4053BG-E1
ICB031	79TH0751	IC MOS UPD74HC74G-E1
ICB032	79TH0745	IC MOS HD74HC32FP-ER
ICB033	79TH0763	IC NJM2403M-TE3
ICC001	79TH0461	IC CXD2024Q-TL
ICC002	79TH0427	IC M51308SP
ICC003	79TH0457	IC NJM2240M-T1
ICC004	79TH0460	IC CXL5506M-T4
ICC005	79TH0451	MOS HD74HC4538FP-ER
ICC006	79TH0451	MOS HD74HC4538FP-ER
ICC007	79TH0452	MOS UPD4053BG-E1
ICC008	79TH0456	IC NJM2283M-T1
ICC010	79TH0455	IC NJM2904M-TE3
ICC011	79TH0437	IC NJM78M12A
ICC301	79TH0551	IC UPC659AGS-E1
ICC302	79TH0551	IC UPC659AGS-E1
ICC303	79TH0551	IC UPC659AGS-E1
ICC304	79TH0462	IC UPD42101G-3-E1
ICC305	79TH0462	IC UPD42101G-3-E1

SYMBOL	PARTS NO	DESCRIPTION
ICC306	79TH0462	IC UPD42101G-3-E1
ICC307	79TH0462	IC UPD42101G-3-E1
ICC308	79TH0545	IC SLA909PF
ICC309	79TH0451	MOS HD74HC4538FP-ER
ICC310	79TH0450	MOS HD74HC164FP-ER
ICC311	79TH0450	MOS HD74HC164FP-ER
ICC312	79TH0458	IC UPC1861GR-T1
ICC313	79TH0454	MOS TC7WU04F-TE12L
ICC314	79TH0462	IC UPD42101G-3-E1
ICC315	79TH0462	IC UPD42101G-3-E1
ICC316	79TH0463	IC UPC662GH
ICC317	79TH0459	IC NJM1496M-TE1
ICC318	79TH0432	IC LA7213
ICC319	79TH0453	MOS TC4S66F-TE85L
ICC320	79TH0436	IC NJM78L05A
ICC321	79TH0462	IC UPD42101G-3-E1
ICE001	79TH0445	IC QDR-1(KA292)
ICE002	79TH0441	IC NJM082BD
ICE003	79TH0442	IC NJM431L-T3
ICE004	79TH0438	IC NJM311D
ICE005	79TH0440	IC NJM3404AD
ICF001	79TH0435	IC NJM2904D
ICF002	79TH0433	IC NJM1496D
ICF003	79TH0435	IC NJM2904D
ICF004	79TH0441	IC NJM082BD
ICF005	79TH0435	IC NJM2904D
ICF006	79TH0428	IC UPC574J-T
ICF007	79TH0428	IC UPC574J-T
ICF008	79TH0435	IC NJM2904D
ICF009	79TH0439	IC NJM2902N
ICF010	79TH0433	IC NJM1496D
ICF011	79TH0441	IC NJM082BD
ICF012	79TH0435	IC NJM2904D
ICF013	79TH0431	IC AN5733
ICF014	79TH0442	IC NJM431L-T3
ICF015	79TH0441	IC NJM082BD
ICF016	79TH0442	IC NJM431L-T3
ICF017	79TH0443	IC TDA9102C
ICF018	79TH0434	IC NJM13700D

SYMBOL	PARTS NO	DESCRIPTION
ICF019	79TH0434	IC NJM13700D
ICF020	79TH0440	IC NJM3404AD
ICF021	79TH0428	IC UPC574J-T
ICF022	79TH0444	MOS HD14538BP
ICG002	79TH0429	IC UPC814C
ICG003	79TH0433	IC NJM1496D
ICG004	79TH0433	IC NJM1496D
ICG005	79TH0441	IC NJM082BD
ICG006	79TH0429	IC UPC814C
ICG007	79TH0430	IC UPC1406HA
ICG008	79TH0426	IC TA8211AH
ICG009	79TH0435	IC NJM2904D
ICH001	79TH0435	IC NJM2904D
ICH002	79TH0441	IC NJM082BD
ICH003	79TH0438	IC NJM311D
ICI001	79TH0727	IC SBX1810-52
ICJ001	79TH0726	IC UPC24M15HF
ICJ002	79TH0734	IC SI-3150C
ICJ003	79TH0734	IC SI-3150C
ICJ004	79TH0733	IC SI-3050C
ICJ005	79TH0733	IC SI-3050C
ICJ006	79TH0733	IC SI-3050C
ICJ007	79TH0728	IC AN1431T
ICJ008	79TH0736	IC PQ30RV11
ICJ009	79TH0728	IC AN1431T
ICJ010	79TH0728	IC AN1431T
ICL001	79TH0725	IC UPC1900CS
ICN001	79TH0444	MOS HD14538BP
PDN001	79TH0420	PHOTO COUPLER

*** TRANSISTORS ***

QOA001	79TH0681	TR 2SC1906-TZ
QOA002	79TH0381	TR 2SC2603-T11E
QOA003	79TH0686	TR RN1202 TPE4
QOA004	79TH0381	TR 2SC2603-T11E
QOA005	79TH0686	TR RN1202 TPE4
QOA006	79TH0381	TR 2SC2603-T11E
QOA007	79TH0686	TR RN1202 TPE4
QOA008	79TH0381	TR 2SC2603-T11E
QOA009	79TH0686	TR RN1202 TPE4

SYMBOL	PARTS NO	DESCRIPTION
QOA010	79TH0681	TR 2SC1906-TZ
QOA011	79TH0677	TR 2SA1005L-T
QOA012	79TH0680	TR 2SC752(G)TMYTPE2
QOA013	79TH0681	TR 2SC1906-TZ
QOA014	79TH0677	TR 2SA1005L-T
QOA015	79TH0681	TR 2SC1906-TZ
QOA016	79TH0681	TR 2SC1906-TZ
QOA017	79TH0677	TR 2SA1005L-T
QOA018	79TH0680	TR 2SC752(G)TMYTPE2
QOA019	79TH0681	TR 2SC1906-TZ
QOA020	79TH0677	TR 2SA1005L-T
QOA021	79TH0681	TR 2SC1906-TZ
QOA022	79TH0681	TR 2SC1906-TZ
QOA023	79TH0677	TR 2SA1005L-T
QOA024	79TH0680	TR 2SC752(G)TMYTPE2
QOA025	79TH0681	TR 2SC1906-TZ
QOA026	79TH0677	TR 2SA1005L-T
QOA027	79TH0681	TR 2SC1906-TZ
QOA028	79TH0679	TR 2SA1371E-AE
QOA029	79TH0684	TR 2SC3468E-AE
QOA030	79TH0679	TR 2SA1371E-AE
QOA031	79TH0684	TR 2SC3468E-AE
QOA032	79TH0679	TR 2SA1371E-AE
QOA033	79TH0684	TR 2SC3468E-AE
QOA034	79TH0381	TR 2SC2603-T11E
QOA035	79TH0381	TR 2SC2603-T11E
QOA036	79TH0381	TR 2SC2603-T11E
QOA037	79TH0381	TR 2SC2603-T11E
QOA038	79TH0686	TR RN1202 TPE4
QOA039	79TH0381	TR 2SC2603-T11E
QOA040	79TH0381	TR 2SC2603-T11E
QOA041	79TH0381	TR 2SC2603-T11E
QOA042	79TH0370	TR 2SA1115-T11E
QOA043	79TH0381	TR 2SC2603-T11E
QOA044	79TH0370	TR 2SA1115-T11E
QOA045	79TH0381	TR 2SC2603-T11E
QOA048	79TH0686	TR RN1202 TPE4
QOA049	79TH0381	TR 2SC2603-T11E
QOA050	79TH0370	TR 2SA1115-T11E

SYMBOL	PARTS NO	DESCRIPTION
QOA301	79TH0381	TR 2SC2603-T11E
QOA302	79TH0381	TR 2SC2603-T11E
QOA303	79TH0381	TR 2SC2603-T11E
QOA304	79TH0381	TR 2SC2603-T11E
QOA305	79TH0381	TR 2SC2603-T11E
QOA306	79TH0381	TR 2SC2603-T11E
QOA307	79TH0381	TR 2SC2603-T11E
QOB001	79TH0424	TR 2SC1623-T1-L5
QOB002	79TH0424	TR 2SC1623-T1-L5
QOB003	79TH0424	TR 2SC1623-T1-L5
QOB004	79TH0423	TR 2SA812-T1-M5
QOB005	79TH0423	TR 2SA812-T1-M5
QOB006	79TH0424	TR 2SC1623-T1-L5
QOB007	79TH0424	TR 2SC1623-T1-L5
QOB008	79TH0388	TR 2SD1587-K
QOB009	79TH0424	TR 2SC1623-T1-L5
QOC001	79TH0424	TR 2SC1623-T1-L5
QOC002	79TH0423	TR 2SA812-T1-M5
QOC003	79TH0424	TR 2SC1623-T1-L5
QOC004	79TH0423	TR 2SA812-T1-M5
QOC005	79TH0423	TR 2SA812-T1-M5
QOC006	79TH0423	TR 2SA812-T1-M5
QOC007	79TH0423	TR 2SA812-T1-M5
QOC008	79TH0423	TR 2SA812-T1-M5
QOC009	79TH0424	TR 2SC1623-T1-L5
QOC010	79TH0424	TR 2SC1623-T1-L5
QOC011	79TH0424	TR 2SC1623-T1-L5
QOC012	79TH0424	TR 2SC1623-T1-L5
QOC013	79TH0424	TR 2SC1623-T1-L5
QOC017	79TH0424	TR 2SC1623-T1-L5
QOC018	79TH0423	TR 2SA812-T1-M5
QOC019	79TH0423	TR 2SA812-T1-M5
QOC020	79TH0424	TR 2SC1623-T1-L5
QOC021	79TH0424	TR 2SC1623-T1-L5
QOC022	79TH0424	TR 2SC1623-T1-L5
QOC023	79TH0424	TR 2SC1623-T1-L5
QOC024	79TH0424	TR 2SC1623-T1-L5
QOC025	79TH0424	TR 2SC1623-T1-L5
QOC026	79TH0423	TR 2SA812-T1-M5

SYMBOL	PARTS NO	DESCRIPTION
QOC027	79TH0424	TR 2SC1623-T1-L5
QOC028	79TH0423	TR 2SA812-T1-M5
QOC029	79TH0423	TR 2SA812-T1-M5
QOC030	79TH0423	TR 2SA812-T1-M5
QOC031	79TH0424	TR 2SC1623-T1-L5
QOC032	79TH0424	TR 2SC1623-T1-L5
QOC302	79TH0423	TR 2SA812-T1-M5
QOC303	79TH0423	TR 2SA812-T1-M5
QOC304	79TH0424	TR 2SC1623-T1-L5
QOC305	79TH0424	TR 2SC1623-T1-L5
QOC306	79TH0423	TR 2SA812-T1-M5
QOC307	79TH0424	TR 2SC1623-T1-L5
QOC308	79TH0424	TR 2SC1623-T1-L5
QOC309	79TH0424	TR 2SC1623-T1-L5
QOC310	79TH0424	TR 2SC1623-T1-L5
QOC311	79TH0424	TR 2SC1623-T1-L5
QOC313	79TH0423	TR 2SA812-T1-M5
QOC314	79TH0423	TR 2SA812-T1-M5
QOC315	79TH0424	TR 2SC1623-T1-L5
QOC316	79TH0423	TR 2SA812-T1-M5
QOC317	79TH0424	TR 2SC1623-T1-L5
QOC318	79TH0424	TR 2SC1623-T1-L5
QOC319	79TH0424	TR 2SC1623-T1-L5
QOC320	79TH0423	TR 2SA812-T1-M5
QOC321	79TH0424	TR 2SC1623-T1-L5
QOC322	79TH0424	TR 2SC1623-T1-L5
QOC323	79TH0424	TR 2SC1623-T1-L5
QOC324	79TH0424	TR 2SC1623-T1-L5
QOC325	79TH0424	TR 2SC1623-T1-L5
QOC326	79TH0424	TR 2SC1623-T1-L5
QOC327	79TH0424	TR 2SC1623-T1-L5
QOC328	79TH0424	TR 2SC1623-T1-L5
QOC329	79TH0424	TR 2SC1623-T1-L5
QOD001	79TH0683	TR 2SC3468E
QOD002	79TH0678	TR 2SA1371-E
QOD003	79TH0683	TR 2SC3468E
QOD004	79TH0678	TR 2SA1371-E
QOD005	79TH0683	TR 2SC3468E
QOD006	79TH0678	TR 2SA1371-E

SYMBOL	PARTS NO	DESCRIPTION
QOE001	79TH0381	TR 2SC2603-T11E
QOE002	79TH0381	TR 2SC2603-T11E
QOE003	79TH0384	TR 2SC2901-T
QOE004	79TH0390	TR 2SD1835-AA
QOE005	79TH0377	TR 2SB1229-AA
⚠QOE006	79TH0393	TR 2SK1217-01
⚠QOE007	79TH0393	TR 2SK1217-01
QOE008	79TH0381	TR 2SC2603-T11E
QOE009	79TH0370	TR 2SA1115-T11E
QOE010	79TH0390	TR 2SD1835-AA
QOE011	79TH0377	TR 2SB1229-AA
⚠QOE012	79TH0397	TR IRFPE40
⚠QOE013	79TH0394	TR 2SK1442
QOE014	79TH0370	TR 2SA1115-T11E
⚠QOE015	79TH0396	TR 2SJ308
QOE016	79TH0390	TR 2SD1835-AA
QOE017	79TH0377	TR 2SB1229-AA
QOE018	79TH0381	TR 2SC2603-T11E
⚠QOE019	79TH0385	TR 2SC4710
QOE020	79TH0370	TR 2SA1115-T11E
⚠QOE022	79TH0385	TR 2SC4710
QOE023	79TH0381	TR 2SC2603-T11E
QOE024	79TH0379	TR 2SC2230A-Y TPE6
QOF001	79TH0381	TR 2SC2603-T11E
QOF002	79TH0381	TR 2SC2603-T11E
QOF003	79TH0381	TR 2SC2603-T11E
QOF004	79TH0381	TR 2SC2603-T11E
QOF005	79TH0381	TR 2SC2603-T11E
QOF006	79TH0381	TR 2SC2603-T11E
QOF007	79TH0381	TR 2SC2603-T11E
QOF008	79TH0387	TR 2SD1348-S
QOF009	79TH0374	TR 2SB986-S
QOF010	79TH0387	TR 2SD1348-S
QOF011	79TH0374	TR 2SB986-S
QOF012	79TH0373	TR 2SA1352
QOF013	79TH0382	TR 2SC2688
QOF014	79TH0382	TR 2SC2688
QOF015	79TH0387	TR 2SD1348-S
QOF016	79TH0374	TR 2SB986-S
QOF017	79TH0381	TR 2SC2603-T11E

SYMBOL	PARTS NO	DESCRIPTION
QOF018	79TH0381	TR 2SC2603-T11E
QOF019	79TH0381	TR 2SC2603-T11E
QOF020	79TH0381	TR 2SC2603-T11E
QOF021	79TH0372	TR 2SA1237(F)
QOF022	79TH0379	TR 2SC2230A-Y TPE6
QOF023	79TH0388	TR 2SD1587-K
QOF024	79TH0375	TR 2SB1096-K
⚠QOF025	79TH0388	TR 2SD1587-K
⚠QOF026	79TH0375	TR 2SB1096-K
⚠QOF027	79TH0388	TR 2SD1587-K
QOF028	79TH0384	TR 2SC2901-T
QOF029	79TH0381	TR 2SC2603-T11E
QOF030	79TH0381	TR 2SC2603-T11E
QOF031	79TH0390	TR 2SD1835-AA
QOF032	79TH0371	TR 2SA1206-T
QOF033	79TH0381	TR 2SC2603-T11E
QOF034	79TH0370	TR 2SA1115-T11E
QOF035	79TH0391	TR 2SK117GR-TPE2
QOF036	79TH0391	TR 2SK117GR-TPE2
QOF037	79TH0381	TR 2SC2603-T11E
QOF038	79TH0381	TR 2SC2603-T11E
QOF039	79TH0381	TR 2SC2603-T11E
QOF040	79TH0381	TR 2SC2603-T11E
QOF041	79TH0381	TR 2SC2603-T11E
QOF042	79TH0391	TR 2SK117GR-TPE2
QOF043	79TH0391	TR 2SK117GR-TPE2
QOF044	79TH0381	TR 2SC2603-T11E
QOF045	79TH0381	TR 2SC2603-T11E
QOF046	79TH0382	TR 2SC2688
QOF047	79TH0381	TR 2SC2603-T11E
QOF048	79TH0381	TR 2SC2603-T11E
QOF049	79TH0381	TR 2SC2603-T11E
QOG002	79TH0383	TR 2SC2901
QOG003	79TH0372	TR 2SA1237(F)
QOG004	79TH0380	TR 2SC2603-E
QOG005	79TH0383	TR 2SC2901
QOG006	79TH0380	TR 2SC2603-E
QOG007	79TH0380	TR 2SC2603-E
QOG008	79TH0380	TR 2SC2603-E
QOG009	79TH0380	TR 2SC2603-E

SYMBOL	PARTS NO	DESCRIPTION
QOG010	79TH0380	TR 2SC2603-E
QOG011	79TH0380	TR 2SC2603-E
QOG012	79TH0380	TR 2SC2603-E
QOG013	79TH0380	TR 2SC2603-E
QOG014	79TH0369	TR 2SA1115-E
QOH001	79TH0389	TR 2SD1835
QOH002	79TH0376	TR 2SB1229
QOH003	79TH0394	TR 2SK1442
⚠QOH004	79TH0386	TR 2SC5238
⚠QOH006	79TH0388	TR 2SD1587-K
⚠QOH007	79TH0375	TR 2SB1096-K
QOH008	79TH0378	TR 2SC2230A-Y
QOH009	79TH0369	TR 2SA1115-E
QOH010	79TH0376	TR 2SB1229
⚠QOH013	79TH0388	TR 2SD1587-K
QOH014	79TH0378	TR 2SC2230A-Y
QOH015	79TH0378	TR 2SC2230A-Y
QOH016	79TH0389	TR 2SD1835
QOH017	79TH0376	TR 2SB1229
⚠QOH018	79TH0396	TR 2SJ308
QOH019	79TH0369	TR 2SA1115-E
⚠QOH020	79TH0395	TR 2SK2012
QOH021	79TH0369	TR 2SA1115-E
⚠QOH022	79TH0395	TR 2SK2012
QOH023	79TH0369	TR 2SA1115-E
⚠QOH024	79TH0395	TR 2SK2012
QOH025	79TH0369	TR 2SA1115-E
⚠QOH026	79TH0395	TR 2SK2012
QOH027	79TH0369	TR 2SA1115-E
⚠QOH028	79TH0395	TR 2SK2012
QOH029	79TH0369	TR 2SA1115-E
⚠QOH030	79TH0395	TR 2SK2012
QOH031	79TH0380	TR 2SC2603-E
QOH032	79TH0378	TR 2SC2230A-Y
QOJ001	79TH0682	TR 2SC2752K
QOJ002	79TH0390	TR 2SD1835-AA
⚠QOJ003	79TH0685	TR 2SK1464
⚠QOJ004	79TH0685	TR 2SK1464
⚠QOJ005	79TH0685	TR 2SK1464
QOJ009	79TH0390	TR 2SD1835-AA

SYMBOL	PARTS NO	DESCRIPTION
QOL001	79TH0390	TR 2SD1835-AA
QOL002	79TH0377	TR 2SB1229-AA
QOL003	79TH0390	TR 2SD1835-AA
QOL004	79TH0377	TR 2SB1229-AA
QON001	79TH0392	TR 2SK657
QOP001	79TH0380	TR 2SC2603-E

*** DIODES ***

SYMBOL	PARTS NO	DESCRIPTION
DOA001	79TH0400	DIODE 1SS119-14 TD
DOA002	79TH0400	DIODE 1SS119-14 TD
DOA003	79TH0400	DIODE 1SS119-14 TD
DOA004	79TH0400	DIODE 1SS119-14 TD
DOA005	79TH0400	DIODE 1SS119-14 TD
DOA006	79TH0400	DIODE 1SS119-14 TD
DOA007	79TH0400	DIODE 1SS119-14 TD
DOA008	79TH0400	DIODE 1SS119-14 TD
DOA009	79TH0400	DIODE 1SS119-14 TD
DOA010	79TH0400	DIODE 1SS119-14 TD
DOA011	79TH0400	DIODE 1SS119-14 TD
DOA012	79TH0400	DIODE 1SS119-14 TD
DOA013	79TH0400	DIODE 1SS119-14 TD
DOA014	79TH0400	DIODE 1SS119-14 TD
DOA015	79TH0400	DIODE 1SS119-14 TD
DOA016	79TH0688	DIODE 1SS83 TD
DOA017	79TH0688	DIODE 1SS83 TD
DOA018	79TH0688	DIODE 1SS83 TD
DOA019	79TH0688	DIODE 1SS83 TD
DOA020	79TH0688	DIODE 1SS83 TD
DOA021	79TH0688	DIODE 1SS83 TD
DOA022	79TH0688	DIODE 1SS83 TD
DOA023	79TH0688	DIODE 1SS83 TD
DOA024	79TH0688	DIODE 1SS83 TD
DOA025	79TH0688	DIODE 1SS83 TD
DOA026	79TH0688	DIODE 1SS83 TD
DOA027	79TH0688	DIODE 1SS83 TD
DOA028	79TH0690	DIODE DS135D-BT
DOA030	79TH0400	DIODE 1SS119-14 TD
DOA031	79TH0400	DIODE 1SS119-14 TD
DOA032	79TH0400	DIODE 1SS119-14 TD

SYMBOL	PARTS NO	DESCRIPTION
DOA033	79TH0400	DIODE 1SS119-14 TD
DOA034	79TH0414	ZENER DIODE HZ-5C-1 TD
DOA036	79TH0414	ZENER DIODE HZ-5C-1 TD
DOA038	79TH0400	DIODE 1SS119-14 TD
DOA039	79TH0400	DIODE 1SS119-14 TD
DOA040	79TH0400	DIODE 1SS119-14 TD
DOA041	79TH0400	DIODE 1SS119-14 TD
DOA042	79TH0400	DIODE 1SS119-14 TD
DOA043	79TH0400	DIODE 1SS119-14 TD
DOA044	79TH0400	DIODE 1SS119-14 TD
DOA045	79TH0400	DIODE 1SS119-14 TD
DOA046	79TH0400	DIODE 1SS119-14 TD
DOA047	79TH0400	DIODE 1SS119-14 TD
DOA048	79TH0400	DIODE 1SS119-14 TD
DOA050	79TH0704	ZENER HZ-7B-3 TD
DOA301	79TH0400	DIODE 1SS119-14 TD
DOA302	79TH0400	DIODE 1SS119-14 TD
DOA303	79TH0400	DIODE 1SS119-14 TD
DOA304	79TH0400	DIODE 1SS119-14 TD
DOA305	79TH0400	DIODE 1SS119-14 TD
DOA306	79TH0400	DIODE 1SS119-14 TD
DOA307	79TH0400	DIODE 1SS119-14 TD
DOA308	79TH0400	DIODE 1SS119-14 TD
DOA309	79TH0400	DIODE 1SS119-14 TD
DOA310	79TH0400	DIODE 1SS119-14 TD
DOA311	79TH0400	DIODE 1SS119-14 TD
DOA312	79TH0400	DIODE 1SS119-14 TD
DOA313	79TH0400	DIODE 1SS119-14 TD
DOA314	79TH0400	DIODE 1SS119-14 TD
DOA315	79TH0400	DIODE 1SS119-14 TD
DOA316	79TH0400	DIODE 1SS119-14 TD
DOA317	79TH0400	DIODE 1SS119-14 TD
DOA318	79TH0400	DIODE 1SS119-14 TD
DOA319	79TH0400	DIODE 1SS119-14 TD
DOA320	79TH0400	DIODE 1SS119-14 TD
DOA321	79TH0400	DIODE 1SS119-14 TD
DOA322	79TH0400	DIODE 1SS119-14 TD
DOA323	79TH0400	DIODE 1SS119-14 TD
DOA324	79TH0400	DIODE 1SS119-14 TD
DOA325	79TH0400	DIODE 1SS119-14 TD

SYMBOL	PARTS NO	DESCRIPTION
DOA326	79TH0400	DIODE 1SS119-14 TD
DOA327	79TH0400	DIODE 1SS119-14 TD
DOB001	79TH0719	ZENER DIODE RD5.1M-T1-B1
DOB002	79TH0719	ZENER DIODE RD5.1M-T1-B1
DOB003	79TH0717	DIODE 1S2838-T1
DOB004	79TH0719	ZENER DIODE RD5.1M-T1-B1
DOB005	79TH0719	ZENER DIODE RD5.1M-T1-B1
DOB006	79TH0719	ZENER DIODE RD5.1M-T1-B1
DOB007	79TH0719	ZENER DIODE RD5.1M-T1-B1
DOB008	79TH0719	ZENER DIODE RD5.1M-T1-B1
DOB009	79TH0719	ZENER DIODE RD5.1M-T1-B1
DOB010	79TH0719	ZENER DIODE RD5.1M-T1-B1
DOB011	79TH0719	ZENER DIODE RD5.1M-T1-B1
DOB012	79TH0719	ZENER DIODE RD5.1M-T1-B1
DOB013	79TH0719	ZENER DIODE RD5.1M-T1-B1
DOB014	79TH0719	ZENER DIODE RD5.1M-T1-B1
DOB015	79TH0719	ZENER DIODE RD5.1M-T1-B1
DOB016	79TH0719	ZENER DIODE RD5.1M-T1-B1
DOB017	79TH0717	DIODE 1S2838-T1
DOB018	79TH0719	ZENER DIODE RD5.1M-T1-B1
DOB019	79TH0719	ZENER DIODE RD5.1M-T1-B1
DOB020	79TH0718	DIODE D1FS4-4063
DOB021	79TH0720	ZENER DIODE RD5.6M-T1-B3
DOB022	79TH0717	DIODE 1S2838-T1
DOB023	79TH0717	DIODE 1S2838-T1
DOB024	79TH0719	ZENER DIODE RD5.1M-T1-B1
DOB025	79TH0719	ZENER DIODE RD5.1M-T1-B1
DOB026	79TH0719	ZENER DIODE RD5.1M-T1-B1
DOB027	79TH0719	ZENER DIODE RD5.1M-T1-B1
DOB028	79TH0719	ZENER DIODE RD5.1M-T1-B1
DOB029	79TH0719	ZENER DIODE RD5.1M-T1-B1
DOB030	79TH0719	ZENER DIODE RD5.1M-T1-B1
DOB031	79TH0719	ZENER DIODE RD5.1M-T1-B1
DOB032	79TH0719	ZENER DIODE RD5.1M-T1-B1
DOB033	79TH0719	ZENER DIODE RD5.1M-T1-B1
DOB034	79TH0719	ZENER DIODE RD5.1M-T1-B1
DOB035	79TH0719	ZENER DIODE RD5.1M-T1-B1
DOB036	79TH0719	ZENER DIODE RD5.1M-T1-B1
DOB037	79TH0719	ZENER DIODE RD5.1M-T1-B1
DOB038	79TH0719	ZENER DIODE RD5.1M-T1-B1

SYMBOL	PARTS NO	DESCRIPTION
DOB039	79TH0719	ZENER DIODE RD5.1M-T1-B1
DOB040	79TH0719	ZENER DIODE RD5.1M-T1-B1
DOB041	79TH0719	ZENER DIODE RD5.1M-T1-B1
DOB042	79TH0719	ZENER DIODE RD5.1M-T1-B1
DOB043	79TH0717	DIODE 1S2838-T1
DOB044	79TH0719	ZENER DIODE RD5.1M-T1-B1
DOB045	79TH0719	ZENER DIODE RD5.1M-T1-B1
DOB046	79TH0719	ZENER DIODE RD5.1M-T1-B1
DOB047	79TH0719	ZENER DIODE RD5.1M-T1-B1
DOB048	79TH0719	ZENER DIODE RD5.1M-T1-B1
DOB049	79TH0719	ZENER DIODE RD5.1M-T1-B1
DOB050	79TH0719	ZENER DIODE RD5.1M-T1-B1
DOB051	79TH0719	ZENER DIODE RD5.1M-T1-B1
DOB052	79TH0717	DIODE 1S2838-T1
DOB053	79TH0717	DIODE 1S2838-T1
DOB054	79TH0717	DIODE 1S2838-T1
DOC001	79TH0425	DIODE 1S2836-T1
DOC002	79TH0425	DIODE 1S2836-T1
DOC301	79TH0425	DIODE 1S2836-T1
DOC302	79TH0425	DIODE 1S2836-T1
DOC303	79TH0425	DIODE 1S2836-T1
DOD001	79TH0687	DIODE 1SS83
DOD002	79TH0687	DIODE 1SS83
DOD003	79TH0687	DIODE 1SS83
DOD004	79TH0687	DIODE 1SS83
DOD005	79TH0687	DIODE 1SS83
DOD006	79TH0687	DIODE 1SS83
DOD007	79TH0405	DIODE DS135D
DOE001	79TH0400	DIODE 1SS119-14 TD
DOE002	79TH0400	DIODE 1SS119-14 TD
DOE003	79TH0400	DIODE 1SS119-14 TD
DOE004	79TH0400	DIODE 1SS119-14 TD
DOE005	79TH0419	ZENER DIODE HZ-22-2 TD
DOE006	79TH0419	ZENER DIODE HZ-22-2 TD
DOE007	79TH0400	DIODE 1SS119-14 TD
DOE008	79TH0400	DIODE 1SS119-14 TD
DOE009	79TH0400	DIODE 1SS119-14 TD
DOE010	79TH0400	DIODE 1SS119-14 TD
DOE011	79TH0400	DIODE 1SS119-14 TD
DOE012	79TH0401	DIODE P6KE400CA

SYMBOL	PARTS NO	DESCRIPTION
DOE013	79TH0401	DIODE P6KE400CA
DOE014	79TH0410	DIODE ESJC30-08
DOE015	79TH0410	DIODE ESJC30-08
DOE016	79TH0410	DIODE ESJC30-08
DOE017	79TH0407	DIODE DFD05TE-BT
DOE018	79TH0407	DIODE DFD05TE-BT
DOE019	79TH0407	DIODE DFD05TE-BT
DOE020	79TH0400	DIODE 1SS119-14 TD
DOE021	79TH0400	DIODE 1SS119-14 TD
DOE022	79TH0414	ZENER DIODE HZ-5C-1 TD
DOE023	79TH0407	DIODE DFD05TE-BT
DOE026	79TH0400	DIODE 1SS119-14 TD
DOE027	79TH0400	DIODE 1SS119-14 TD
DOE028	79TH0400	DIODE 1SS119-14 TD
DOE029	79TH0400	DIODE 1SS119-14 TD
DOE030	79TH0411	DIODE ERD38-04
DOE031	79TH0407	DIODE DFD05TE-BT
DOE032	79TH0419	ZENER DIODE HZ-22-2 TD
DOE033	79TH0419	ZENER DIODE HZ-22-2 TD
DOE034	79TH0400	DIODE 1SS119-14 TD
DOE035	79TH0400	DIODE 1SS119-14 TD
DOE036	79TH0400	DIODE 1SS119-14 TD
DOE037	79TH0400	DIODE 1SS119-14 TD
DOE038	79TH0400	DIODE 1SS119-14 TD
DOE039	79TH0400	DIODE 1SS119-14 TD
DOE043	79TH0408	DIODE DFD05TR BT
DOE044	79TH0410	DIODE ESJC30-08
DOE045	79TH0410	DIODE ESJC30-08
DOE046	79TH0410	DIODE ESJC30-08
DOE047	79TH0400	DIODE 1SS119-14 TD
DOE048	79TH0400	DIODE 1SS119-14 TD
DOE049	79TH0416	ZENER DIODE HZ-12B-1
DOF001	79TH0400	DIODE 1SS119-14 TD
DOF002	79TH0400	DIODE 1SS119-14 TD
DOF003	79TH0400	DIODE 1SS119-14 TD
DOF004	79TH0400	DIODE 1SS119-14 TD
DOF005	79TH0400	DIODE 1SS119-14 TD
DOF006	79TH0400	DIODE 1SS119-14 TD
DOF007	79TH0400	DIODE 1SS119-14 TD
DOF008	79TH0400	DIODE 1SS119-14 TD

SYMBOL	PARTS NO	DESCRIPTION
DOF009	79TH0400	DIODE 1SS119-14 TD
DOF010	79TH0400	DIODE 1SS119-14 TD
DOF011	79TH0407	DIODE DFD05TE-BT
DOF012	79TH0407	DIODE DFD05TE-BT
DOF013	79TH0400	DIODE 1SS119-14 TD
DOF014	79TH0400	DIODE 1SS119-14 TD
DOF015	79TH0400	DIODE 1SS119-14 TD
DOF016	79TH0400	DIODE 1SS119-14 TD
DOF017	79TH0400	DIODE 1SS119-14 TD
DOF018	79TH0400	DIODE 1SS119-14 TD
DOF019	79TH0400	DIODE 1SS119-14 TD
DOF020	79TH0400	DIODE 1SS119-14 TD
DOF021	79TH0400	DIODE 1SS119-14 TD
DOF022	79TH0400	DIODE 1SS119-14 TD
DOF023	79TH0400	DIODE 1SS119-14 TD
DOF024	79TH0400	DIODE 1SS119-14 TD
DOF025	79TH0400	DIODE 1SS119-14 TD
DOF026	79TH0400	DIODE 1SS119-14 TD
DOF027	79TH0400	DIODE 1SS119-14 TD
DOF028	79TH0400	DIODE 1SS119-14 TD
DOF029	79TH0400	DIODE 1SS119-14 TD
DOF030	79TH0400	DIODE 1SS119-14 TD
DOF031	79TH0400	DIODE 1SS119-14 TD
DOF032	79TH0404	DIODE 1S 1887
DOF033	79TH0404	DIODE 1S 1887
DOF034	79TH0400	DIODE 1SS119-14 TD
DOF035	79TH0400	DIODE 1SS119-14 TD
DOF036	79TH0400	DIODE 1SS119-14 TD
DOF037	79TH0400	DIODE 1SS119-14 TD
DOF038	79TH0400	DIODE 1SS119-14 TD
DOF039	79TH0400	DIODE 1SS119-14 TD
DOF040	79TH0400	DIODE 1SS119-14 TD
DOF041	79TH0400	DIODE 1SS119-14 TD
DOF042	79TH0400	DIODE 1SS119-14 TD
DOF043	79TH0400	DIODE 1SS119-14 TD
DOF044	79TH0400	DIODE 1SS119-14 TD
DOF045	79TH0407	DIODE DFD05TE-BT
DOF046	79TH0400	DIODE 1SS119-14 TD
DOF047	79TH0400	DIODE 1SS119-14 TD
DOF048	79TH0400	DIODE 1SS119-14 TD

SYMBOL	PARTS NO	DESCRIPTION
DOF049	79TH0400	DIODE 1SS119-14 TD
DOF050	79TH0400	DIODE 1SS119-14 TD
DOF051	79TH0400	DIODE 1SS119-14 TD
DOF052	79TH0412	ZENER DIODE HZ-3B-2 TD
DOF054	79TH0400	DIODE 1SS119-14 TD
DOG004	79TH0399	DIODE 1SS119-14FS
DOG005	79TH0416	ZENER DIODE HZ-12B-1
DOG006	79TH0399	DIODE 1SS119-14FS
DOG007	79TH0416	ZENER DIODE HZ-12B-1
DOG008	79TH0399	DIODE 1SS119-14FS
DOG009	79TH0399	DIODE 1SS119-14FS
DOH001	79TH0406	DIODE DFD05TE
DOH002	79TH0422	DIODE SB340-5009L
⚠DOH004	79TH0421	DIODE DD50R-3PB
⚠DOH005	79TH0421	DIODE DD50R-3PB
DOH006	79TH0399	DIODE 1SS119-14FS
DOH007	79TH0399	DIODE 1SS119-14FS
DOH008	79TH0409	DIODE EL-1Z
DOH009	79TH0409	DIODE EL-1Z
DOH010	79TH0399	DIODE 1SS119-14FS
DOH011	79TH0399	DIODE 1SS119-14FS
DOH012	79TH0399	DIODE 1SS119-14FS
DOH013	79TH0399	DIODE 1SS119-14FS
DOH014	79TH0398	DIODE 1S 2076A
DOH016	79TH0406	DIODE DFD05TE
DOH017	79TH0406	DIODE DFD05TE
DOH018	79TH0399	DIODE 1SS119-14FS
DOH019	79TH0399	DIODE 1SS119-14FS
DOH020	79TH0399	DIODE 1SS119-14FS
DOH021	79TH0399	DIODE 1SS119-14FS
DOH022	79TH0406	DIODE DFD05TE
DOH023	79TH0418	ZENER DIODE HZ-22-2
DOH024	79TH0418	ZENER DIODE HZ-22-2
DOH025	79TH0411	DIODE ERD38-04
DOH026	79TH0550	DIODE 1.5KE300CA
DOH027	79TH0550	DIODE 1.5KE300CA
DOH028	79TH0402	DIODE 1.5KE400CA
DOH029	79TH0402	DIODE 1.5KE400CA
DOH030	79TH0399	DIODE 1SS119-14FS
DOI001	79TH0709	LED DIODE TLOG116

SYMBOL	PARTS NO	DESCRIPTION
DOI002	79TH0703	ZENER DIODE HZ-7B-3
⚠DOJ001	79TH0692	DIODE RBV-1506
DOJ005	79TH0690	DIODE DS135D-BT
⚠DOJ006	79TH0708	THYRISTOR TF861S
DOJ007	79TH0690	DIODE DS135D-BT
DOJ008	79TH0702	DIODE ERA38-06
DOJ009	79TH0707	DIODE MA700A
DOJ010	79TH0698	DIODE ERB37-10
DOJ011	79TH0697	DIODE ERB84-009
DOJ012	79TH0702	DIODE ERA38-06
DOJ014	79TH0698	DIODE ERB37-10
DOJ015	79TH0698	DIODE ERB37-10
DOJ016	79TH0696	DIODE ERC91-02
DOJ017	79TH0694	DIODE ERC88M-009
DOJ018	79TH0690	DIODE DS135D-BT
DOJ019	79TH0690	DIODE DS135D-BT
DOJ020	79TH0690	DIODE DS135D-BT
DOJ021	79TH0690	DIODE DS135D-BT
DOJ022	79TH0690	DIODE DS135D-BT
DOJ023	79TH0690	DIODE DS135D-BT
DOJ024	79TH0695	DIODE ERC80M-004
DOJ025	79TH0690	DIODE DS135D-BT
DOJ026	79TH0690	DIODE DS135D-BT
DOJ029	79TH0690	DIODE DS135D-BT
DOJ030	79TH0690	DIODE DS135D-BT
DOJ031	79TH0690	DIODE DS135D-BT
DOJ032	79TH0690	DIODE DS135D-BT
DOJ033	79TH0705	DIODE HZ-12A-2 TD
DOJ034	79TH0696	DIODE ERC91-02
DOJ035	79TH0690	DIODE DS135D-BT
DOJ036	79TH0696	DIODE ERC91-02
DOJ037	79TH0699	DIODE ERB44-02
DOJ038	79TH0691	DIODE FML-G16S
DOJ039	79TH0691	DIODE FML-G16S
DOJ040	79TH0705	DIODE HZ-12A-2 TD
DOJ041	79TH0706	DIODE HZ-18-3 TD
DOJ042	79TH0701	DIODE ERA15-02
DOJ043	79TH0689	DIODE 1SS120 TD
DOJ044	79TH0690	DIODE DS135D-BT
DOJ046	79TH0693	DIODE ERC81-006

SYMBOL	PARTS NO	DESCRIPTION
DOJ047	79TH0696	DIODE ERC91-02
DOJ048	79TH0690	DIODE DS135D-BT
DOL002	79TH0700	DIODE ERA82-004 V3
DOL003	79TH0700	DIODE ERA82-004 V3
DOL004	79TH0688	DIODE 1SS83 TD
DOL005	79TH0688	DIODE 1SS83 TD
DOL006	79TH0688	DIODE 1SS83 TD
DOL007	79TH0688	DIODE 1SS83 TD
DOL008	79TH0689	DIODE 1SS120 TD
DOL009	79TH0689	DIODE 1SS120 TD
DOM001	79TH0403	DIODE DAN401
DON001	79TH0405	DIODE DS135D
DON002	79TH0413	ZENER DIODE HZ-5C-1
DON003	79TH0417	ZENER DIODE HZ-15-1
DOP001	79TH0399	DIODE 1SS119-14FS
DOP002	79TH0399	DIODE 1SS119-14FS
DOP003	79TH0399	DIODE 1SS119-14FS
DOP004	79TH0415	ZENER DIODE HZ-9A-3
DOP005	79TH0415	ZENER DIODE HZ-9A-3
⚠PDJ001	79TH0711	PHOTO COUPLER PS2561L1
⚠PDJ002	79TH0711	PHOTO COUPLER PS2561L1
⚠PDJ003	79TH0711	PHOTO COUPLER PS2561L1
⚠PDJ004	79TH0711	PHOTO COUPLER PS2561L1
PDJ005	79TH0710	PHOTO COUPLER PS2501
*** TRANSFORMERS ***		
⚠TOE001	79TH0465	FBT
⚠TOH001	79TH0464	DRIVE TRANS
⚠TOH002	79TH0466	H OUT TRANS
⚠TOJ001	79TH0767	ST-216B
⚠TOJ002	79TH0766	ST-215K
*** VARIABLE RESISTORS ***		
VRA001	79TH0607	R,VARIABLE 10KH
VRC001	79TH0234	R,VARIABLE 10KH
VRC002	79TH0232	R,VARIABLE 1KH
VRC003	79TH0232	R,VARIABLE 1KH
VRC004	79TH0232	R,VARIABLE 1KH
VRC005	79TH0232	R,VARIABLE 1KH
VRC006	79TH0232	R,VARIABLE 1KH
VRC301	79TH0233	R,VARIABLE 5KH
VRE001	79TH0188	R,VARIABLE 100KH
VRE002	79TH0187	R,VARIABLE 10KH
VRJ001	79TH0606	R,VARIABLE 2KH
*** RELAYS & SWITCHES ***		
SOA001	79TH0795	SLIDE SWITCH SSSF042
SOA002	79TH0793	SLIDE SWITCH SSSF012
SOA003	79TH0793	SLIDE SWITCH SSSF012
SOA004	79TH0793	SLIDE SWITCH SSSF012
SOA005	79TH0793	SLIDE SWITCH SSSF012
SOA006	79TH0793	SLIDE SWITCH SSSF012
SOA007	79TH0796	DIP SWITCH SSGM18
SOA008	79TH0796	DIP SWITCH SSGM18
SOA301	79TH0793	SLIDE SWITCH SSSF012
SOA302	79TH0793	SLIDE SWITCH SSSF012
SOA303	79TH0792	SLIDE SWITCH SSSF02
SOA304	79TH0792	SLIDE SWITCH SSSF02
SOA305	79TH0794	SLIDE SWITCH SSSF023
SOA306	79TH0792	SLIDE SWITCH SSSF02
SOB001	79TH0799	TACT SWITCH
SOB002	79TH0799	TACT SWITCH
SOB003	79TH0799	TACT SWITCH
SOB004	79TH0799	TACT SWITCH
SOB005	79TH0799	TACT SWITCH
SOB006	79TH0799	TACT SWITCH
SOB007	79TH0791	SLIDE SWITCH
SOI001	79TH0797	PUSH SWITCH ESB6610
*** COILS & FILTERS ***		
A003	61111822	CERAMIC OSC
C001	79TH0488	YBTKACS-38001Z
C301	79TH0490	FIP TH355LNK-7464=P3
DLC301	79TH0491	FIP G355ENK-3277=P3
FLA001	79TH0780	FILTER 306-55B470M100
FLA002	79TH0780	FILTER 306-55B470M100
FLA003	79TH0780	FILTER 306-55B470M100
FLA004	79TH0780	FILTER 306-55B470M100
FLA005	79TH0780	FILTER 306-55B470M100
FLA006	79TH0780	FILTER 306-55B470M100
FLA007	79TH0780	FILTER 306-55B470M100
FLA008	79TH0484	FILTER
FLA010	79TH0484	FILTER
FLA011	79TH0484	FILTER
FLA012	79TH0779	FILTER 310H-55B222M250
FLA013	79TH0779	FILTER 310H-55B222M250
FLA014	79TH0780	FILTER 306-55B470M100
FLA015	79TH0780	FILTER 306-55B470M100
FLA016	79TH0780	FILTER 306-55B470M100
FLA017	79TH0780	FILTER 306-55B470M100
FLC001	79TH0487	FIP TH355LSJ-5728=P3
FLC002	79TH0487	FIP TH355LSJ-5728=P3
FLC003	79TH0487	FIP TH355LSJ-5728=P3
FLC004	79TH0486	FIP TH356LNM-4449=P3
FLC006	79TH0484	FILTER
FLC007	79TH0484	FILTER
FLC008	79TH0484	FILTER
FLD001	79TH0779	FILTER 310H-55B222M250
FLD002	79TH0484	FILTER
FLD003	79TH0484	FILTER
FLD004	79TH0484	FILTER
FLD005	79TH0484	FILTER
⚠JOZ001	79TH0778	FILTER(INLET) 10GEEG3E
LOA001	79TH0770	BEAD INDUCTOR BL01RN1-A62
LOA002	79TH0770	BEAD INDUCTOR BL01RN1-A62
LOA003	79TH0770	BEAD INDUCTOR BL01RN1-A62
LOA004	79TH0770	BEAD INDUCTOR BL01RN1-A62
LOA005	79TH0770	BEAD INDUCTOR BL01RN1-A62
LOA006	79TH0770	BEAD INDUCTOR BL01RN1-A62
LOA007	79TH0770	BEAD INDUCTOR BL01RN1-A62
LOA008	79TH0770	BEAD INDUCTOR BL01RN1-A62
LOA009	79TH0770	BEAD INDUCTOR BL01RN1-A62
LOC001	79TH0473	COIL 560UH
LOC002	79TH0485	COIL BLM41A01PT
LOC003	79TH0485	COIL BLM41A01PT
LOC004	79TH0473	COIL 560UH
LOC005	79TH0473	COIL 560UH
LOC006	79TH0470	COIL ELEP 2.2MH
LOC007	79TH0470	COIL ELEP 2.2MH
LOC008	79TH0471	COIL 330UH
LOC009	79TH0473	COIL 560UH
LOC301	79TH0485	COIL BLM41A01PT
LOC302	79TH0485	COIL BLM41A01PT
LOC303	79TH0485	COIL BLM41A01PT
LOC304	79TH0485	COIL BLM41A01PT
LOC305	79TH0485	COIL BLM41A01PT
LOC306	79TH0485	COIL BLM41A01PT
LOC307	79TH0485	COIL BLM41A01PT
LOC308	79TH0485	COIL BLM41A01PT
LOC309	79TH0485	COIL BLM41A01PT
LOC310	79TH0485	COIL BLM41A01PT
LOC311	79TH0485	COIL BLM41A01PT
LOC312	79TH0485	COIL BLM41A01PT
LOC313	79TH0485	COIL BLM41A01PT
LOC314	79TH0485	COIL BLM41A01PT
LOC315	79TH0485	COIL BLM41A01PT
LOC316	79TH0485	COIL BLM41A01PT
LOC317	79TH0485	COIL BLM41A01PT
LOC318	79TH0469	COIL 180UH
LOC319	79TH0469	COIL 180UH
LOC320	79TH0474	COIL 820UH
LOC321	79TH0469	COIL 180UH
LOC322	79TH0474	COIL 820UH
LOC323	79TH0476	CHOKE COIL 100MH
LOC324	79TH0476	CHOKE COIL 100MH
LOC327	79TH0485	COIL BLM41A01PT
LOC328	79TH0468	COIL 100UH
LOD004	79TH0770	BEAD INDUCTOR BL01RN1-A62
LOD005	79TH0770	BEAD INDUCTOR BL01RN1-A62
LOD006	79TH0770	BEAD INDUCTOR BL01RN1-A62
LOD007	79TH0770	BEAD INDUCTOR BL01RN1-A62
LOD008	79TH0770	BEAD INDUCTOR BL01RN1-A62
LOE001	79TH0478	BEAD COIL B-20F-28
LOE002	79TH0478	BEAD COIL B-20F-28
LOE003	79TH0479	CHOKE COIL DL-484
LOE004	79TH0480	CHOKE COIL DL-667A
LOE005	79TH0475	COIL 470UH

SYMBOL	PARTS NO	DESCRIPTION
LOE006	79TH0482	CHOKE COIL DL-672
LOE007	79TH0478	BEAD COIL B-20F-28
LOG001	79TH0472	COIL 470UH
LOG002	79TH0472	COIL 470UH
LOH001	79TH0478	BEAD COIL B-20F-28
LOH002	79TH0478	BEAD COIL B-20F-28
LOH003	79TH0478	BEAD COIL B-20F-28
LOH004	79TH0477	COIL SBC-34
LOH005	79TH0467	H.LIN COIL DL-676A
LOH006	79TH0467	H.LIN COIL DL-676A
LOH007	79TH0478	BEAD COIL B-20F-28
⚠ LOH008	79TH0481	CHOKE COIL DL-671
LOH009	79TH0478	BEAD COIL B-20F-28
⚠ LOJ001	79TH0776	DELAY LINE DL-663
⚠ LOJ003	79TH0776	DELAY LINE DL-663
LOJ006	79TH0771	BEAD COIL B-20F-38
LOJ007	79TH0771	BEAD COIL B-20F-38
LOJ008	79TH0771	BEAD COIL B-20F-38
LOJ009	79TH0818	LINE FILTER COIL
LOJ010	79TH0775	CHOKE COIL RCH-110 220M
LOJ012	79TH0815	BEAD COA AB4X2X8
LOJ013	79TH0774	CHOKE COIL RCH-110 100M
LOJ017	79TH0815	BEAD COA AB4X2X8
LOJ018	79TH0774	CHOKE COIL RCH-110 100M
LOJ022	79TH0816	BEAD COA MS9X7X4.5W
LOJ023	79TH0775	CHOKE COIL RCH-110 220M
LOJ025	79TH0816	BEAD COA MS9X7X4.5W
LOJ026	79TH0769	COIL SBC-05
LOJ028	79TH0773	CHOKE COIL DL-670
LOJ029	79TH0815	BEAD COA AB4X2X8
LOJ030	79TH0774	CHOKE COIL RCH-110 100M
LOJ032	79TH0815	BEAD COA AB4X2X8
LOJ034	79TH0775	CHOKE COIL RCH-110 220M
LOK004	79TH0483	CHOKE COILSK-33P-160-100S
LOK005	79TH0483	CHOKE COILSK-33P-160-100S
LOL001	79TH0772	BEAD COIL B-20L-44
⚠ LOZ001	79TH0768	DL-608A
⚠ LOZ002	79TH0768	DL-608A
⚠ LOZ003	79TH0777	DELAY LINE DL-664A

SYMBOL	PARTS NO	DESCRIPTION
RLH001	79TH0492	RELAY
TOC001	79TH0489	YBTKANS-38000UH
YOJ003	79TH0819	FERRITE COA FSOB 220MH
YOZ002	79TH0817	FERRITE COA ZCAT2032-0930
YOZ003	79TH0814	BAR LOCK NO.08432

*** PWB ASSYS ***

	79TH0028	PHOTO DET PWB ASSY PG027A
	79TH0029	POWER SW PWB ASSY PG027A
	79TH0030	REMOTE PWB ASSY PG027A
⚠	79TH0031	H&V DEF PWB ASSY PG084B
⚠	79TH0032	H DEF PWB ASSY PG083A
⚠	79TH0033	HV&FOCUS PWB ASSY PG085A
⚠	79TH0034	SW REG PWB ASSY PG031B
	79TH0035	SW REG CTL PWB ASSYPG042B
	79TH0036	FAN SENSE PWB ASSY PG090A
⚠	79TH0037	LINE FILTER PWB ASSY
⚠	79TH0038	AC RESET PWB ASSY PG098B
⚠	79TH0039	DF&AUDIO PWB ASSY PG086A
	79TH0040	VIDEO PWB ASSY PG082A
⚠	79TH0041	RGB&INPUT PWB ASSY PG081A
	79TH0042	CPU PWB ASSY PG026B
⚠	79TH0043	CRT SOCKET PWB ASSYPG025A

*** ELECTRICAL PARTS & MISCELLANEOUS PARTS ***

A004	70102916	SOCKET,IC 42P
CN1905	79TH0781	HEAD PHONE JACK
CN1906	79TH0781	HEAD PHONE JACK
⚠ FAJ001	79TH0801	FAN FBA06A24MS
⚠ FAZ001	79TH0800	FAN FBA08A24MS
⚠ FAZ00	79TH0800	FAN FBA08A24MS
⚠ FAZ002	79TH0800	FAN FBA08A24MS
⚠ FAZ005	79TH0800	FAN FBA08A24MS
FLC005	79TH0449	CERAMIC OSC
⚠ FOJ001	79TH0822	FUSE 8A 125V
⚠ FOJ002	79TH0820	FUSE 3A 125V
⚠ FOJ003	79TH0821	FUSE 1A 125V
⚠ FOJ004	79TH0820	FUSE 3A 125V
JOA001	79TH0783	D SUB(MINI)
JOA002	79TH0783	D SUB(MINI)

SYMBOL	PARTS NO	DESCRIPTION
JOA003	79TH0784	BNC TERMINAL
JOA004	79TH0784	BNC TERMINAL
JOA005	79TH0784	BNC TERMINAL
JOA006	79TH0784	BNC TERMINAL
JOA007	79TH0784	BNC TERMINAL
JOA008	79TH0784	BNC TERMINAL
JOA009	79TH0784	BNC TERMINAL
JOA010	79TH0784	BNC TERMINAL
JOA011	79TH0784	BNC TERMINAL
JOA012	79TH0784	BNC TERMINAL
JOA013	79TH0784	BNC TERMINAL
JOA014	79TH0784	BNC TERMINAL
JOA015	79TH0784	BNC TERMINAL
JOA016	79TH0784	BNC TERMINAL
JOA017	79TH0789	S-TERMINAL TCS7949-01-202
JOA018	79TH0789	S-TERMINAL TCS7949-01-202
JOA019	79TH0789	S-TERMINAL TCS7949-01-202
JOA020	79TH0789	S-TERMINAL TCS7949-01-202
JOA021	79TH0787	PIN JACK JPJ2022-01-030
JOA022	79TH0787	PIN JACK JPJ2022-01-030
JOA023	79TH0786	PIN JACK JPJ1022-01-020
JOA024	79TH0788	PIN JACK JPJ2022-01-020
JOA025	79TH0787	PIN JACK JPJ2022-01-030
JOA026	79TH0787	PIN JACK JPJ2022-01-030
JOA027	79TH0786	PIN JACK JPJ1022-01-020
JOA028	79TH0788	PIN JACK JPJ2022-01-020
JOA029	79TH0787	PIN JACK JPJ2022-01-030
JOA030	79TH0787	PIN JACK JPJ2022-01-030
JOA031	79TH0786	PIN JACK JPJ1022-01-020
JOA032	79TH0788	PIN JACK JPJ2022-01-020
JOA033	79TH0782	TERMINAL(4P) MC91-17-10
MD014	79TH0546	PP900WP
⚠ PHJ001	79TH0712	THERMISTOR POSITIVE
⚠ PHJ002	79TH0713	THERMISTOR POSITIVE
⚠ RLJ001	79TH0798	RELAY G6R-1A DC12V
SGD001	79TH0716	SPARK GAP DSP301N-S00B
SGD002	79TH0716	SPARK GAP DSP301N-S00B
SGD003	79TH0716	SPARK GAP DSP301N-S00B
SGD004	79TH0714	SPARK GAP DSA181LS

SYMBOL	PARTS NO	DESCRIPTION
SGD005	79TH0716	SPARK GAP DSP301N-S00B
⚠ SGD006	79TH0715	SPARK GAP DSA152MA
XOB001	79TH0742	CRYSTAL TQC-211A-8R(10MH
XOC001	79TH0447	CRYSTAL 3.579545MHZ
XOC002	79TH0448	CRYSTAL 4.433619MHZ
⚠ YOD002	79TH0790	CRT SOCKET HPS0380-01-100
YOD003	79TH0785	TAB 62409-1
YOZ001	79TH0823	SPEAKER EP-090623C
YO003	79TH0544	PLUG CODE

*** APPEARANCE PARTS ***

MBA006	79TH0808	SCREW M3X18
MBA007	79TH0811	3M/M
MBJ002	79TH0807	SCREW M3X10
MBJ003	79TH0810	SCREW M4X8
MBJ004	79TH0809	SCREW M3X30
MBJ006	79TH0811	3M/M
MD001	79TH0512	PACKIN(TOP-R) 2M019-108
MD002	79TH0513	PACKIN(TOP-L) 2M019-109
MD003	79TH0514	PACKIN(BOTTOM-R) 2M019-11
MD004	79TH0515	PACKIN(BOTTOM-L)2M019-111
MD007	79TH0518	FRONT PANEL
MD008	79TH0519	TOP PANEL
MD010	79TH0521	ACCESSORY HOLDER PLATE
MD011	79TH0522	ACCESSORY CUSHION
MD012	79TH0523	ACCESSORY BOX
MSA001	79TH0803	CONNECTOR PANEL(2)
MSA004	79TH0804	BNC BRACKET (1)
MSA005	79TH0805	BNC BRACKET (2)
MSB001	79TH0802	CONNECTOR PANEL(1)
MS001	79TH0830	CABINET FRONT
MS002	79TH0012	CABINET BACK
MS002	79TH0497	PLATE(FRONT-R)
MS003	79TH0013	HOLDER,REMOCON
MS003	79TH0498	PLATE(FRONT-L)
MS004	79TH0014	FOOT(FRONT-R)
MS004	79TH0499	PLATE(BACK-R)

SYMBOL	PARTS NO	DESCRIPTION
MS005	79TH0015	FOOT(FRONT-L)
MS005	79TH0500	PLATE(BACK-L)
MS006	79TH0501	BACK PANEL
MS006	79TH0509	HANDOL 3M019-90
MS007	79TH0022	CAP
MS008	79TH0016	FOOT(BACK)
MS009	79TH0017	POWER BUTTON
MS010	79TH0018	LED PLATE
MS011	79TH0019	PHOTO SENSOR
MS012	79TH0020	CABINET CENTER
MS013	79TH0502	CONNECTOR PANEL 2M019-43B
MS014	79TH0503	SW BRACKET
⚠VOZ001	79TH0806	CRT M89LAK113X

*** PRINTED & PACKING MATERIALS ***

SYMBOL	PARTS NO	DESCRIPTION
MBJ007	79TH0827	FE3M/M
MD005	79TH0832	CARTON BOX (BOTTOM)
MD006	79TH0831	CARTON BOX (TOP)
MD009	79TH0520	MIRRER MAT SHEET
MD013	79TH0524	PACKAGE.POLY BAG4M019-172
MSJ004	79TH0813	SPACER AQ-19
MSJ005	79TH0812	SPACER SQ-30
⚠YO001	79TH0542	POWER CODE
YO002	79TH0543	REM-T HAND UNIT (RD-336E)
YO005	79TH0547	BARCODE LABEL

*** MECHANICAL PARTS ***

SYMBOL	PARTS NO	DESCRIPTION
MBA001	79TH0526	SCREW M3X8
MBA002	79TH0527	SCREW M3X8
MBA003	79TH0535	SCREW M3X15
MBB001	79TH0526	SCREW M3X8
MBC001	79TH0527	SCREW M3X8
MBE001	79TH0526	SCREW M3X8
MBE002	79TH0525	SCREW M3X8
MBE003	79TH0527	SCREW M3X8
MBE004	79TH0529	SCREW M3X8
MBE005	79TH0528	SCREW M3X8
MBE006	79TH0532	SCREW M3X8
MBE007	79TH0533	SCREW M3X8
MBF001	79TH0527	SCREW M3X8
MBF002	79TH0528	SCREW M3X8
MBG001	79TH0527	SCREW M3X8

SYMBOL	PARTS NO	DESCRIPTION
MBH001	79TH0525	SCREW M3X8
MBH002	79TH0527	SCREW M3X8
MBH003	79TH0535	SCREW M3X15
MBH004	79TH0534	SCREW M3X12
MBH005	79TH0528	SCREW M3X8
MBH006	79TH0526	SCREW M3X8
MBJ001	79TH0527	SCREW M3X8
MBJ005	79TH0528	SCREW M3X8
MBJ010	79TH0526	SCREW M3X8
MBJ011	79TH0532	SCREW M3X8
MB001	79TH0525	SCREW M3X8
MB002	79TH0526	SCREW M3X8
MB002	79TH0531	SCREW M3X8
MB003	79TH0529	SCREW M3X8
MB003	79TH0536	SCREW M4X8
MB004	79TH0537	SCREW M4X8
MB005	79TH0539	SCREW M4X35
MB006	79TH0531	SCREW M3X8
MB007	79TH0538	SCREW M4X8
MB008	79TH0530	SCREW M3X8
MB009	79TH0541	4M/M ZMC
MB010	79TH0552	4M/M ZMC
MB011	79TH0540	U NAT
MB013	79TH0527	SCREW M3X8

*** RESISTORS ***

SYMBOL	PARTS NO	DESCRIPTION
COG004	79TH0070	R,CARBON 33KH 1/4W
FLC009	79TH0049	R,CARBON 100H 1/4W
FLC010	79TH0049	R,CARBON 100H 1/4W
FLC011	79TH0047	R,CARBON 0H 1/4W
FLC012	79TH0047	R,CARBON 0H 1/4W
FLC013	79TH0047	R,CARBON 0H 1/4W
FLC014	79TH0047	R,CARBON 0H 1/4W
FLC015	79TH0047	R,CARBON 0H 1/4W
FLC016	79TH0047	R,CARBON 0H 1/4W
FLC017	79TH0047	R,CARBON 0H 1/4W
FLC018	79TH0047	R,CARBON 0H 1/4W
FLC019	79TH0047	R,CARBON 0H 1/4W
FLC020	79TH0047	R,CARBON 0H 1/4W

SYMBOL	PARTS NO	DESCRIPTION
FLC021	79TH0047	R,CARBON 0H 1/4W
FLC022	79TH0047	R,CARBON 0H 1/4W
FLC023	79TH0047	R,CARBON 0H 1/4W
FLC024	79TH0047	R,CARBON 0H 1/4W
FLC025	79TH0047	R,CARBON 0H 1/4W
FLC026	79TH0047	R,CARBON 0H 1/4W
FLC027	79TH0047	R,CARBON 0H 1/4W
FLC028	79TH0047	R,CARBON 0H 1/4W
FLC301	79TH0049	R,CARBON 100H 1/4W
FLC302	79TH0049	R,CARBON 100H 1/4W
FLC303	79TH0049	R,CARBON 100H 1/4W
JCG008	79TH0046	R,CARBON 33KH 1/4W
RNB001	79TH0741	R,NETWORK EXB-F9E 473J
RNB002	79TH0741	R,NETWORK EXB-F9E 473J
RNB003	79TH0741	R,NETWORK EXB-F9E 473J
RNB004	79TH0741	R,NETWORK EXB-F9E 473J
RNB005	79TH0741	R,NETWORK EXB-F9E 473J
RNB006	79TH0741	R,NETWORK EXB-F9E 473J
RNB007	79TH0741	R,NETWORK EXB-F9E 473J
RNB008	79TH0741	R,NETWORK EXB-F9E 473J
RNB009	79TH0741	R,NETWORK EXB-F9E 473J
RNB010	79TH0741	R,NETWORK EXB-F9E 473J
RNB011	79TH0741	R,NETWORK EXB-F9E 473J
RNM001	79TH0446	R,NETWORK EXB-F4E 472J
ROA001	79TH0603	R,METAL 75H 2W
ROA002	79TH0106	R,CARBON 220K 1/4W
ROA003	79TH0603	R,METAL 75H 2W
ROA004	79TH0106	R,CARBON 220K 1/4W
ROA005	79TH0603	R,METAL 75H 2W
ROA006	79TH0106	R,CARBON 220K 1/4W
ROA007	79TH0106	R,CARBON 220K 1/4W
ROA008	79TH0106	R,CARBON 220K 1/4W
ROA009	79TH0603	R,METAL 75H 2W
ROA010	79TH0106	R,CARBON 220K 1/4W
ROA011	79TH0603	R,METAL 75H 2W
ROA012	79TH0106	R,CARBON 220K 1/4W
ROA013	79TH0603	R,METAL 75H 2W
ROA014	79TH0106	R,CARBON 220K 1/4W
ROA015	79TH0568	R,CARBON 75H 1/2W

SYMBOL	PARTS NO	DESCRIPTION
ROA016	79TH0106	R,CARBON 220K 1/4W
ROA017	79TH0568	R,CARBON 75H 1/2W
ROA018	79TH0106	R,CARBON 220K 1/4W
ROA019	79TH0113	R,CARBON 330H 1/4W
ROA020	79TH0113	R,CARBON 330H 1/4W
ROA021	79TH0118	R,CARBON 3.9K 1/4W
ROA022	79TH0092	R,CARBON 10KH 1/4W
ROA023	79TH0113	R,CARBON 330H 1/4W
ROA024	79TH0113	R,CARBON 330H 1/4W
ROA025	79TH0118	R,CARBON 3.9K 1/4W
ROA026	79TH0092	R,CARBON 10KH 1/4W
ROA027	79TH0091	R,CARBON 1KH 1/4W
ROA028	79TH0104	R,CARBON 2.2K 1/4W
ROA029	79TH0113	R,CARBON 330H 1/4W
ROA030	79TH0113	R,CARBON 330H 1/4W
ROA031	79TH0118	R,CARBON 3.9K 1/4W
ROA032	79TH0092	R,CARBON 10KH 1/4W
ROA033	79TH0093	R,CARBON 100K 1/4W
ROA034	79TH0093	R,CARBON 100K 1/4W
ROA035	79TH0093	R,CARBON 100K 1/4W
ROA036	79TH0113	R,CARBON 330H 1/4W
ROA037	79TH0113	R,CARBON 330H 1/4W
ROA038	79TH0118	R,CARBON 3.9K 1/4W
ROA039	79TH0124	R,CARBON 5.6K 1/4W
ROA040	79TH0092	R,CARBON 10KH 1/4W
ROA041	79TH0113	R,CARBON 330H 1/4W
ROA042	79TH0113	R,CARBON 330H 1/4W
ROA043	79TH0118	R,CARBON 3.9K 1/4W
ROA044	79TH0124	R,CARBON 5.6K 1/4W
ROA045	79TH0092	R,CARBON 10KH 1/4W
ROA046	79TH0113	R,CARBON 330H 1/4W
ROA047	79TH0113	R,CARBON 330H 1/4W
ROA048	79TH0118	R,CARBON 3.9K 1/4W
ROA049	79TH0124	R,CARBON 5.6K 1/4W
ROA050	79TH0092	R,CARBON 10KH 1/4W
ROA051	79TH0092	R,CARBON 10KH 1/4W
ROA052	79TH0125	R,CARBON 56KH 1/4W
ROA053	79TH0104	R,CARBON 2.2K 1/4W
ROA054	79TH0091	R,CARBON 1KH 1/4W

SYMBOL	PARTS NO	DESCRIPTION
ROA055	79TH0091	R,CARBON 1KH 1/4W
ROA056	79TH0091	R,CARBON 1KH 1/4W
ROA057	79TH0092	R,CARBON 10KH 1/4W
ROA058	79TH0129	R,CARBON 680H 1/4W
ROA059	79TH0129	R,CARBON 680H 1/4W
ROA060	79TH0129	R,CARBON 680H 1/4W
ROA061	79TH0092	R,CARBON 10KH 1/4W
ROA062	79TH0098	R,CARBON 1.5K 1/4W
ROA063	79TH0090	R,CARBON 100H 1/4W
ROA064	79TH0092	R,CARBON 10KH 1/4W
ROA065	79TH0092	R,CARBON 10KH 1/4W
ROA066	79TH0092	R,CARBON 10KH 1/4W
ROA067	79TH0104	R,CARBON 2.2K 1/4W
ROA068	79TH0106	R,CARBON 220K 1/4W
ROA069	79TH0090	R,CARBON 100H 1/4W
ROA070	79TH0090	R,CARBON 100H 1/4W
ROA071	79TH0124	R,CARBON 5.6K 1/4W
ROA072	79TH0119	R,CARBON 470H 1/4W
ROA073	79TH0113	R,CARBON 330H 1/4W
ROA074	79TH0117	R,CARBON 390H 1/4W
ROA075	79TH0113	R,CARBON 330H 1/4W
ROA076	79TH0090	R,CARBON 100H 1/4W
ROA077	79TH0090	R,CARBON 100H 1/4W
ROA078	79TH0092	R,CARBON 10KH 1/4W
ROA079	79TH0090	R,CARBON 100H 1/4W
ROA080	79TH0092	R,CARBON 10KH 1/4W
ROA081	79TH0092	R,CARBON 10KH 1/4W
ROA082	79TH0104	R,CARBON 2.2K 1/4W
ROA083	79TH0106	R,CARBON 220K 1/4W
ROA084	79TH0090	R,CARBON 100H 1/4W
ROA085	79TH0090	R,CARBON 100H 1/4W
ROA086	79TH0124	R,CARBON 5.6K 1/4W
ROA087	79TH0119	R,CARBON 470H 1/4W
ROA088	79TH0113	R,CARBON 330H 1/4W
ROA089	79TH0117	R,CARBON 390H 1/4W
ROA090	79TH0113	R,CARBON 330H 1/4W
ROA091	79TH0090	R,CARBON 100H 1/4W
ROA092	79TH0092	R,CARBON 10KH 1/4W
ROA093	79TH0090	R,CARBON 100H 1/4W
ROA094	79TH0092	R,CARBON 10KH 1/4W

SYMBOL	PARTS NO	DESCRIPTION
ROA152	79TH0093	R,CARBON 100K 1/4W
ROA153	79TH0104	R,CARBON 2.2K 1/4W
ROA154	79TH0092	R,CARBON 10KH 1/4W
ROA155	79TH0098	R,CARBON 1.5K 1/4W
ROA156	79TH0114	R,CARBON 3.3K 1/4W
ROA157	79TH0091	R,CARBON 1KH 1/4W
ROA158	79TH0105	R,CARBON 22KH 1/4W
ROA159	79TH0091	R,CARBON 1KH 1/4W
ROA160	79TH0119	R,CARBON 470H 1/4W
ROA161	79TH0114	R,CARBON 3.3K 1/4W
ROA162	79TH0091	R,CARBON 1KH 1/4W
ROA163	79TH0105	R,CARBON 22KH 1/4W
ROA164	79TH0105	R,CARBON 22KH 1/4W
ROA165	79TH0105	R,CARBON 22KH 1/4W
ROA166	79TH0091	R,CARBON 1KH 1/4W
ROA167	79TH0119	R,CARBON 470H 1/4W
ROA168	79TH0091	R,CARBON 1KH 1/4W
ROA169	79TH0091	R,CARBON 1KH 1/4W
ROA170	79TH0091	R,CARBON 1KH 1/4W
ROA171	79TH0091	R,CARBON 1KH 1/4W
ROA172	79TH0093	R,CARBON 100K 1/4W
ROA173	79TH0102	R,CARBON 18K 1/4W
ROA174	79TH0124	R,CARBON 5.6K 1/4W
ROA175	79TH0104	R,CARBON 2.2K 1/4W
ROA176	79TH0104	R,CARBON 2.2K 1/4W
ROA177	79TH0105	R,CARBON 22KH 1/4W
ROA178	79TH0125	R,CARBON 56KH 1/4W
ROA179	79TH0092	R,CARBON 10KH 1/4W
ROA180	79TH0091	R,CARBON 1KH 1/4W
ROA181	79TH0091	R,CARBON 1KH 1/4W
ROA182	79TH0092	R,CARBON 10KH 1/4W
ROA183	79TH0092	R,CARBON 10KH 1/4W
ROA184	79TH0092	R,CARBON 10KH 1/4W
ROA185	79TH0092	R,CARBON 10KH 1/4W
ROA186	79TH0093	R,CARBON 100K 1/4W
ROA187	79TH0091	R,CARBON 1KH 1/4W
ROA188	79TH0092	R,CARBON 10KH 1/4W
ROA189	79TH0105	R,CARBON 22KH 1/4W
ROA190	79TH0105	R,CARBON 22KH 1/4W
ROA191	79TH0092	R,CARBON 10KH 1/4W

SYMBOL	PARTS NO	DESCRIPTION
ROA095	79TH0092	R,CARBON 10KH 1/4W
ROA096	79TH0104	R,CARBON 2.2K 1/4W
ROA097	79TH0106	R,CARBON 220K 1/4W
ROA098	79TH0090	R,CARBON 100H 1/4W
ROA099	79TH0090	R,CARBON 100H 1/4W
ROA100	79TH0124	R,CARBON 5.6K 1/4W
ROA101	79TH0119	R,CARBON 470H 1/4W
ROA102	79TH0113	R,CARBON 330H 1/4W
ROA103	79TH0117	R,CARBON 390H 1/4W
ROA104	79TH0113	R,CARBON 330H 1/4W
ROA105	79TH0563	R,CARBON 150H 1/4W
ROA106	79TH0563	R,CARBON 150H 1/4W
ROA107	79TH0563	R,CARBON 150H 1/4W
ROA108	79TH0090	R,CARBON 100H 1/4W
ROA110	79TH0090	R,CARBON 100H 1/4W
ROA111	79TH0562	R,CARBON 15H 1/4W
ROA112	79TH0090	R,CARBON 100H 1/4W
ROA118	79TH0090	R,CARBON 100H 1/4W
ROA120	79TH0090	R,CARBON 100H 1/4W
ROA121	79TH0562	R,CARBON 15H 1/4W
ROA122	79TH0090	R,CARBON 100H 1/4W
ROA128	79TH0090	R,CARBON 100H 1/4W
ROA130	79TH0090	R,CARBON 100H 1/4W
ROA131	79TH0562	R,CARBON 15H 1/4W
ROA132	79TH0090	R,CARBON 100H 1/4W
ROA137	79TH0124	R,CARBON 5.6K 1/4W
ROA138	79TH0125	R,CARBON 56KH 1/4W
ROA139	79TH0104	R,CARBON 2.2K 1/4W
ROA140	79TH0093	R,CARBON 100K 1/4W
ROA141	79TH0104	R,CARBON 2.2K 1/4W
ROA142	79TH0125	R,CARBON 56KH 1/4W
ROA143	79TH0104	R,CARBON 2.2K 1/4W
ROA144	79TH0093	R,CARBON 100K 1/4W
ROA145	79TH0104	R,CARBON 2.2K 1/4W
ROA146	79TH0125	R,CARBON 56KH 1/4W
ROA147	79TH0104	R,CARBON 2.2K 1/4W
ROA148	79TH0093	R,CARBON 100K 1/4W
ROA149	79TH0104	R,CARBON 2.2K 1/4W
ROA150	79TH0125	R,CARBON 56KH 1/4W
ROA151	79TH0104	R,CARBON 2.2K 1/4W

SYMBOL	PARTS NO	DESCRIPTION
ROA192	79TH0092	R,CARBON 10KH 1/4W
ROA193	79TH0092	R,CARBON 10KH 1/4W
ROA194	79TH0105	R,CARBON 22KH 1/4W
ROA195	79TH0092	R,CARBON 10KH 1/4W
ROA196	79TH0105	R,CARBON 22KH 1/4W
ROA197	79TH0092	R,CARBON 10KH 1/4W
ROA198	79TH0105	R,CARBON 22KH 1/4W
ROA199	79TH0102	R,CARBON 18K 1/4W
ROA200	79TH0092	R,CARBON 10KH 1/4W
ROA201	79TH0105	R,CARBON 22KH 1/4W
ROA202	79TH0102	R,CARBON 18K 1/4W
ROA203	79TH0092	R,CARBON 10KH 1/4W
ROA204	79TH0105	R,CARBON 22KH 1/4W
ROA205	79TH0102	R,CARBON 18K 1/4W
ROA206	79TH0092	R,CARBON 10KH 1/4W
ROA207	79TH0091	R,CARBON 1KH 1/4W
ROA208	79TH0104	R,CARBON 2.2K 1/4W
ROA209	79TH0090	R,CARBON 100H 1/4W
ROA210	79TH0104	R,CARBON 2.2K 1/4W
ROA211	79TH0090	R,CARBON 100H 1/4W
ROA212	79TH0104	R,CARBON 2.2K 1/4W
ROA213	79TH0090	R,CARBON 100H 1/4W
ROA214	79TH0091	R,CARBON 1KH 1/4W
ROA215	79TH0114	R,CARBON 3.3K 1/4W
ROA216	79TH0564	R,CARBON 220H 1/4W
ROA217	79TH0091	R,CARBON 1KH 1/4W
ROA218	79TH0091	R,CARBON 1KH 1/4W
ROA219	79TH0091	R,CARBON 1KH 1/4W
ROA220	79TH0091	R,CARBON 1KH 1/4W
ROA221	79TH0091	R,CARBON 1KH 1/4W
ROA222	79TH0091	R,CARBON 1KH 1/4W
ROA223	79TH0091	R,CARBON 1KH 1/4W
ROA224	79TH0093	R,CARBON 100K 1/4W
ROA225	79TH0121	R,CARBON 47KH 1/4W
ROA227	79TH0112	R,CARBON 27KH 1/4W
ROA229	79TH0093	R,CARBON 100K 1/4W
ROA230	79TH0107	R,CARBON 2.2M 1/4W
ROA231	79TH0093	R,CARBON 100K 1/4W
ROA232	79TH0091	R,CARBON 1KH 1/4W
ROA233	79TH0092	R,CARBON 10KH 1/4W

SYMBOL	PARTS NO	DESCRIPTION
ROA234	79TH0130	R,CARBON 6.8K 1/4W
ROA235	79TH0111	R,CARBON 2.7K 1/4W
ROA236	79TH0106	R,CARBON 220K 1/4W
ROA237	79TH0092	R,CARBON 10KH 1/4W
ROA238	79TH0092	R,CARBON 10KH 1/4W
ROA239	79TH0090	R,CARBON 100H 1/4W
ROA240	79TH0091	R,CARBON 1KH 1/4W
ROA241	79TH0564	R,CARBON 220H 1/4W
ROA242	79TH0104	R,CARBON 2.2K 1/4W
ROA243	79TH0564	R,CARBON 220H 1/4W
ROA244	79TH0104	R,CARBON 2.2K 1/4W
ROA245	79TH0564	R,CARBON 220H 1/4W
ROA246	79TH0104	R,CARBON 2.2K 1/4W
ROA247	79TH0090	R,CARBON 100H 1/4W
ROA248	79TH0090	R,CARBON 100H 1/4W
ROA249	79TH0092	R,CARBON 10KH 1/4W
ROA250	79TH0133	R,CARBON 8.2K 1/4W
ROA251	79TH0124	R,CARBON 5.6K 1/4W
ROA252	79TH0090	R,CARBON 100H 1/4W
ROA253	79TH0090	R,CARBON 100H 1/4W
ROA254	79TH0090	R,CARBON 100H 1/4W
ROA301	79TH0603	R,METAL 75H 2W
ROA302	79TH0093	R,CARBON 100K 1/4W
ROA303	79TH0603	R,METAL 75H 2W
ROA304	79TH0093	R,CARBON 100K 1/4W
ROA305	79TH0090	R,CARBON 100H 1/4W
ROA306	79TH0090	R,CARBON 100H 1/4W
ROA307	79TH0090	R,CARBON 100H 1/4W
ROA308	79TH0603	R,METAL 75H 2W
ROA309	79TH0093	R,CARBON 100K 1/4W
ROA310	79TH0603	R,METAL 75H 2W
ROA311	79TH0093	R,CARBON 100K 1/4W
ROA312	79TH0090	R,CARBON 100H 1/4W
ROA313	79TH0090	R,CARBON 100H 1/4W
ROA314	79TH0090	R,CARBON 100H 1/4W
ROA315	79TH0603	R,METAL 75H 2W
ROA316	79TH0093	R,CARBON 100K 1/4W
ROA317	79TH0603	R,METAL 75H 2W
ROA318	79TH0093	R,CARBON 100K 1/4W
ROA319	79TH0090	R,CARBON 100H 1/4W
ROA320	79TH0090	R,CARBON 100H 1/4W
ROA321	79TH0090	R,CARBON 100H 1/4W
ROA322	79TH0093	R,CARBON 100K 1/4W
ROA323	79TH0093	R,CARBON 100K 1/4W
ROA324	79TH0093	R,CARBON 100K 1/4W
ROA325	79TH0093	R,CARBON 100K 1/4W
ROA326	79TH0093	R,CARBON 100K 1/4W
ROA327	79TH0093	R,CARBON 100K 1/4W
ROA328	79TH0106	R,CARBON 220K 1/4W
ROA329	79TH0106	R,CARBON 220K 1/4W
ROA330	79TH0106	R,CARBON 220K 1/4W
ROA331	79TH0091	R,CARBON 1KH 1/4W
ROA332	79TH0091	R,CARBON 1KH 1/4W
ROA333	79TH0091	R,CARBON 1KH 1/4W
ROA334	79TH0114	R,CARBON 3.3K 1/4W
ROA335	79TH0114	R,CARBON 3.3K 1/4W
ROA336	79TH0106	R,CARBON 220K 1/4W
ROA337	79TH0106	R,CARBON 220K 1/4W
ROA338	79TH0106	R,CARBON 220K 1/4W
ROA339	79TH0091	R,CARBON 1KH 1/4W
ROA340	79TH0091	R,CARBON 1KH 1/4W
ROA341	79TH0091	R,CARBON 1KH 1/4W
ROA342	79TH0114	R,CARBON 3.3K 1/4W
ROA343	79TH0114	R,CARBON 3.3K 1/4W
ROA344	79TH0092	R,CARBON 10KH 1/4W
ROA345	79TH0092	R,CARBON 10KH 1/4W
ROA346	79TH0114	R,CARBON 3.3K 1/4W
ROA347	79TH0114	R,CARBON 3.3K 1/4W
ROA348	79TH0090	R,CARBON 100H 1/4W
ROA349	79TH0090	R,CARBON 100H 1/4W
ROA350	79TH0090	R,CARBON 100H 1/4W
ROA351	79TH0090	R,CARBON 100H 1/4W
ROA352	79TH0090	R,CARBON 100H 1/4W
ROA353	79TH0092	R,CARBON 10KH 1/4W
ROA354	79TH0092	R,CARBON 10KH 1/4W
ROA355	79TH0111	R,CARBON 2.7K 1/4W
ROA356	79TH0105	R,CARBON 22KH 1/4W
ROA357	79TH0092	R,CARBON 10KH 1/4W
ROA358	79TH0092	R,CARBON 10KH 1/4W
ROA359	79TH0105	R,CARBON 22KH 1/4W
ROA360	79TH0105	R,CARBON 22KH 1/4W
ROA361	79TH0105	R,CARBON 22KH 1/4W
ROA362	79TH0092	R,CARBON 10KH 1/4W
ROA363	79TH0092	R,CARBON 10KH 1/4W
ROA364	79TH0092	R,CARBON 10KH 1/4W
ROA365	79TH0092	R,CARBON 10KH 1/4W
ROA366	79TH0096	R,CARBON 12KH 1/4W
ROA367	79TH0092	R,CARBON 10KH 1/4W
ROA368	79TH0092	R,CARBON 10KH 1/4W
ROA369	79TH0092	R,CARBON 10KH 1/4W
ROA371	79TH0092	R,CARBON 10KH 1/4W
ROA372	79TH0092	R,CARBON 10KH 1/4W
ROA373	79TH0093	R,CARBON 100K 1/4W
ROA374	79TH0093	R,CARBON 100K 1/4W
ROA375	79TH0086	R,CARBON 0H 1/4W
ROB001	79TH0221	R,CARBON 47K 1/10W
ROB002	79TH0221	R,CARBON 47K 1/10W
ROB003	79TH0221	R,CARBON 47K 1/10W
ROB004	79TH0221	R,CARBON 47K 1/10W
ROB005	79TH0221	R,CARBON 47K 1/10W
ROB006	79TH0221	R,CARBON 47K 1/10W
ROB007	79TH0221	R,CARBON 47K 1/10W
ROB008	79TH0221	R,CARBON 47K 1/10W
ROB009	79TH0200	R,CARBON 1K 1/10W
ROB010	79TH0210	R,CARBON 5.6K 1/10W
ROB011	79TH0202	R,CARBON 1.5K 1/10W
ROB012	79TH0608	R,CARBON 82H 1/10W
ROB013	79TH0618	R,METAL 1.8KH 1/6W
ROB014	79TH0614	R,METAL 470H 1/6W
ROB015	79TH0619	R,METAL 2.2KH 1/6W
ROB016	79TH0618	R,METAL 1.8KH 1/6W
ROB017	79TH0613	R,METAL 120H 1/6W
ROB018	79TH0609	R,METAL 15H 1/6W
ROB019	79TH0617	R,METAL 1KH 1/6W
ROB020	79TH0616	R,METAL 820H 1/6W
ROB021	79TH0614	R,METAL 470H 1/6W
ROB022	79TH0615	R,METAL 680H 1/6W
ROB023	79TH0620	R,METAL 4.7KH 1/6W
ROB024	79TH0616	R,METAL 820H 1/6W
ROB025	79TH0224	R,CARBON 100K 1/10W
ROB026	79TH0194	R,CARBON 330H 1/10W
ROB027	79TH0192	R,CARBON 220H 1/10W
ROB028	79TH0192	R,CARBON 220H 1/10W
ROB029	79TH0192	R,CARBON 220H 1/10W
ROB030	79TH0192	R,CARBON 220H 1/10W
ROB031	79TH0192	R,CARBON 220H 1/10W
ROB032	79TH0192	R,CARBON 220H 1/10W
ROB033	79TH0192	R,CARBON 220H 1/10W
ROB034	79TH0192	R,CARBON 220H 1/10W
ROB035	79TH0192	R,CARBON 220H 1/10W
ROB036	79TH0192	R,CARBON 220H 1/10W
ROB037	79TH0221	R,CARBON 47K 1/10W
ROB038	79TH0192	R,CARBON 220H 1/10W
ROB039	79TH0192	R,CARBON 220H 1/10W
ROB040	79TH0192	R,CARBON 220H 1/10W
ROB041	79TH0192	R,CARBON 220H 1/10W
ROB042	79TH0192	R,CARBON 220H 1/10W
ROB043	79TH0192	R,CARBON 220H 1/10W
ROB044	79TH0192	R,CARBON 220H 1/10W
ROB045	79TH0192	R,CARBON 220H 1/10W
ROB046	79TH0192	R,CARBON 220H 1/10W
ROB047	79TH0192	R,CARBON 220H 1/10W
ROB048	79TH0192	R,CARBON 220H 1/10W
ROB049	79TH0192	R,CARBON 220H 1/10W
ROB050	79TH0192	R,CARBON 220H 1/10W
ROB051	79TH0192	R,CARBON 220H 1/10W
ROB052	79TH0192	R,CARBON 220H 1/10W
ROB053	79TH0192	R,CARBON 220H 1/10W
ROB054	79TH0192	R,CARBON 220H 1/10W
ROB055	79TH0571	R,FUSE 18H 1/2W
ROB056	79TH0224	R,CARBON 100K 1/10W
ROB057	79TH0213	R,CARBON 10K 1/10W
ROB058	79TH0200	R,CARBON 1K 1/10W
ROB059	79TH0200	R,CARBON 1K 1/10W
ROB060	79TH0221	R,CARBON 47K 1/10W
ROB061	79TH0213	R,CARBON 10K 1/10W
ROB062	79TH0221	R,CARBON 47K 1/10W
ROB063	79TH0213	R,CARBON 10K 1/10W
ROB064	79TH0213	R,CARBON 10K 1/10W
ROB065	79TH0225	R,CARBON 150K 1/10W

SYMBOL	PARTS NO	DESCRIPTION
ROB066	79TH0200	R,CARBON 1K 1/10W
ROB067	79TH0213	R,CARBON 10K 1/10W
ROB068	79TH0213	R,CARBON 10K 1/10W
ROB069	79TH0221	R,CARBON 47K 1/10W
ROB070	79TH0612	R,METAL 100H 1/6W
ROB071	79TH0610	R,METAL 33H 1/6W
ROB072	79TH0614	R,METAL 470H 1/6W
ROB073	79TH0221	R,CARBON 47K 1/10W
ROB074	79TH0612	R,METAL 100H 1/6W
ROB075	79TH0611	R,METAL 68H 1/6W
ROB076	79TH0192	R,CARBON 220H 1/10W
ROB077	79TH0192	R,CARBON 220H 1/10W
ROB078	79TH0221	R,CARBON 47K 1/10W
ROB079	79TH0221	R,CARBON 47K 1/10W
ROB080	79TH0221	R,CARBON 47K 1/10W
ROB081	79TH0221	R,CARBON 47K 1/10W
ROB082	79TH0204	R,CARBON 2.2K 1/10W
ROB083	79TH0213	R,CARBON 10K 1/10W
ROB084	79TH0204	R,CARBON 2.2K 1/10W
ROB085	79TH0206	R,CARBON 3.3K 1/10W
ROB086	79TH0225	R,CARBON 150K 1/10W
ROB087	79TH0209	R,CARBON 4.7K 1/10W
ROB088	79TH0209	R,CARBON 4.7K 1/10W
ROB089	79TH0225	R,CARBON 150K 1/10W
ROB090	79TH0074	R,CARBON 4.7K 1/4W
ROB091	79TH0211	R,CARBON 6.8K 1/10W
ROB092	79TH0192	R,CARBON 220H 1/10W
ROB094	79TH0051	R,CARBON 10KH 1/4W
ROB095	79TH0051	R,CARBON 10KH 1/4W
ROB096	79TH0581	R,METAL 47H 2W
ROC001	79TH0213	R,CARBON 10K 1/10W
ROC002	79TH0213	R,CARBON 10K 1/10W
ROC003	79TH0213	R,CARBON 10K 1/10W
ROC004	79TH0219	R,CARBON 33K 1/10W
ROC005	79TH0213	R,CARBON 10K 1/10W
ROC006	79TH0190	R,CARBON 100H 1/10W
ROC007	79TH0202	R,CARBON 1.5K 1/10W
ROC008	79TH0192	R,CARBON 220H 1/10W
ROC009	79TH0200	R,CARBON 1K 1/10W
ROC010	79TH0200	R,CARBON 1K 1/10W

SYMBOL	PARTS NO	DESCRIPTION
ROC012	79TH0200	R,CARBON 1K 1/10W
ROC013	79TH0197	R,CARBON 560H 1/10W
ROC014	79TH0210	R,CARBON 5.6K 1/10W
ROC015	79TH0190	R,CARBON 100H 1/10W
ROC016	79TH0206	R,CARBON 3.3K 1/10W
ROC017	79TH0190	R,CARBON 100H 1/10W
ROC018	79TH0191	R,CARBON 180H 1/10W
ROC019	79TH0205	R,CARBON 2.7K 1/10W
ROC020	79TH0191	R,CARBON 180H 1/10W
ROC021	79TH0205	R,CARBON 2.7K 1/10W
ROC022	79TH0190	R,CARBON 100H 1/10W
ROC023	79TH0206	R,CARBON 3.3K 1/10W
ROC024	79TH0197	R,CARBON 560H 1/10W
ROC025	79TH0210	R,CARBON 5.6K 1/10W
ROC027	79TH0190	R,CARBON 100H 1/10W
ROC028	79TH0206	R,CARBON 3.3K 1/10W
ROC029	79TH0190	R,CARBON 100H 1/10W
ROC030	79TH0206	R,CARBON 3.3K 1/10W
ROC031	79TH0197	R,CARBON 560H 1/10W
ROC032	79TH0210	R,CARBON 5.6K 1/10W
ROC034	79TH0190	R,CARBON 100H 1/10W
ROC035	79TH0206	R,CARBON 3.3K 1/10W
ROC036	79TH0204	R,CARBON 2.2K 1/10W
ROC037	79TH0213	R,CARBON 10K 1/10W
ROC038	79TH0213	R,CARBON 10K 1/10W
ROC039	79TH0213	R,CARBON 10K 1/10W
ROC040	79TH0213	R,CARBON 10K 1/10W
ROC041	79TH0213	R,CARBON 10K 1/10W
ROC042	79TH0213	R,CARBON 10K 1/10W
ROC043	79TH0200	R,CARBON 1K 1/10W
ROC044	79TH0215	R,CARBON 15K 1/10W
ROC045	79TH0213	R,CARBON 10K 1/10W
ROC048	79TH0190	R,CARBON 100H 1/10W
ROC049	79TH0204	R,CARBON 2.2K 1/10W
ROC050	79TH0200	R,CARBON 1K 1/10W
ROC051	79TH0200	R,CARBON 1K 1/10W
ROC052	79TH0203	R,CARBON 1.8K 1/10W
ROC053	79TH0203	R,CARBON 1.8K 1/10W
ROC054	79TH0200	R,CARBON 1K 1/10W
ROC055	79TH0215	R,CARBON 15K 1/10W

SYMBOL	PARTS NO	DESCRIPTION
ROC056	79TH0213	R,CARBON 10K 1/10W
ROC057	79TH0206	R,CARBON 3.3K 1/10W
ROC058	79TH0190	R,CARBON 100H 1/10W
ROC059	79TH0213	R,CARBON 10K 1/10W
ROC061	79TH0213	R,CARBON 10K 1/10W
ROC062	79TH0216	R,CARBON 18K 1/10W
ROC063	79TH0200	R,CARBON 1K 1/10W
ROC078	79TH0219	R,CARBON 33K 1/10W
ROC079	79TH0213	R,CARBON 10K 1/10W
ROC080	79TH0190	R,CARBON 100H 1/10W
ROC081	79TH0202	R,CARBON 1.5K 1/10W
ROC082	79TH0198	R,CARBON 680H 1/10W
ROC083	79TH0192	R,CARBON 220H 1/10W
ROC084	79TH0200	R,CARBON 1K 1/10W
ROC086	79TH0200	R,CARBON 1K 1/10W
ROC087	79TH0226	R,CARBON 180K 1/10W
ROC088	79TH0192	R,CARBON 220H 1/10W
ROC089	79TH0224	R,CARBON 100K 1/10W
ROC090	79TH0217	R,CARBON 22K 1/10W
ROC091	79TH0213	R,CARBON 10K 1/10W
ROC092	79TH0200	R,CARBON 1K 1/10W
ROC093	79TH0197	R,CARBON 560H 1/10W
ROC094	79TH0219	R,CARBON 33K 1/10W
ROC095	79TH0217	R,CARBON 22K 1/10W
ROC096	79TH0213	R,CARBON 10K 1/10W
ROC097	79TH0213	R,CARBON 10K 1/10W
ROC098	79TH0213	R,CARBON 10K 1/10W
ROC099	79TH0210	R,CARBON 5.6K 1/10W
ROC100	79TH0217	R,CARBON 22K 1/10W
ROC101	79TH0217	R,CARBON 22K 1/10W
ROC102	79TH0213	R,CARBON 10K 1/10W
ROC103	79TH0213	R,CARBON 10K 1/10W
ROC104	79TH0217	R,CARBON 22K 1/10W
ROC105	79TH0213	R,CARBON 10K 1/10W
ROC106	79TH0224	R,CARBON 100K 1/10W
ROC107	79TH0224	R,CARBON 100K 1/10W
ROC108	79TH0224	R,CARBON 100K 1/10W
ROC109	79TH0204	R,CARBON 2.2K 1/10W
ROC110	79TH0206	R,CARBON 3.3K 1/10W
ROC111	79TH0190	R,CARBON 100H 1/10W

SYMBOL	PARTS NO	DESCRIPTION
ROC112	79TH0228	R,CARBON 1200K 1/10W
ROC113	79TH0213	R,CARBON 10K 1/10W
ROC114	79TH0213	R,CARBON 10K 1/10W
ROC115	79TH0217	R,CARBON 22K 1/10W
ROC116	79TH0213	R,CARBON 10K 1/10W
ROC117	79TH0217	R,CARBON 22K 1/10W
ROC118	79TH0213	R,CARBON 10K 1/10W
ROC119	79TH0208	R,CARBON 4.3K 1/10W
ROC121	79TH0195	R,CARBON 390H 1/10W
ROC122	79TH0202	R,CARBON 1.5K 1/10W
ROC123	79TH0200	R,CARBON 1K 1/10W
ROC124	79TH0200	R,CARBON 1K 1/10W
ROC125	79TH0190	R,CARBON 100H 1/10W
ROC126	79TH0200	R,CARBON 1K 1/10W
ROC127	79TH0198	R,CARBON 680H 1/10W
ROC128	79TH0200	R,CARBON 1K 1/10W
ROC129	79TH0201	R,CARBON 1.2K 1/10W
ROC130	79TH0190	R,CARBON 100H 1/10W
ROC131	79TH0210	R,CARBON 5.6K 1/10W
ROC132	79TH0202	R,CARBON 1.5K 1/10W
ROC133	79TH0196	R,CARBON 470H 1/10W
ROC134	79TH0206	R,CARBON 3.3K 1/10W
ROC135	79TH0190	R,CARBON 100H 1/10W
ROC136	79TH0210	R,CARBON 5.6K 1/10W
ROC137	79TH0202	R,CARBON 1.5K 1/10W
ROC138	79TH0196	R,CARBON 470H 1/10W
ROC139	79TH0206	R,CARBON 3.3K 1/10W
ROC140	79TH0190	R,CARBON 100H 1/10W
ROC141	79TH0213	R,CARBON 10K 1/10W
ROC142	79TH0206	R,CARBON 3.3K 1/10W
ROC143	79TH0229	R,CARBON 1800K 1/10W
ROC144	79TH0212	R,CARBON 8.2K 1/10W
ROC145	79TH0214	R,CARBON 12K 1/10W
ROC146	79TH0227	R,CARBON 680K 1/10W
ROC147	79TH0213	R,CARBON 10K 1/10W
ROC148	79TH0193	R,CARBON 270H 1/10W
ROC149	79TH0202	R,CARBON 1.5K 1/10W
ROC150	79TH0207	R,CARBON 3.9K 1/10W
ROC151	79TH0205	R,CARBON 2.7K 1/10W
ROC152	79TH0210	R,CARBON 5.6K 1/10W

SYMBOL	PARTS NO	DESCRIPTION
ROC153	79TH0224	R,CARBON 100K 1/10W
ROC154	79TH0204	R,CARBON 2.2K 1/10W
ROC155	79TH0210	R,CARBON 5.6K 1/10W
ROC156	79TH0206	R,CARBON 3.3K 1/10W
ROC157	79TH0213	R,CARBON 10K 1/10W
ROC158	79TH0206	R,CARBON 3.3K 1/10W
ROC159	79TH0206	R,CARBON 3.3K 1/10W
ROC160	79TH0224	R,CARBON 100K 1/10W
ROC161	79TH0213	R,CARBON 10K 1/10W
ROC162	79TH0216	R,CARBON 18K 1/10W
ROC163	79TH0224	R,CARBON 100K 1/10W
ROC164	79TH0190	R,CARBON 100H 1/10W
ROC165	79TH0190	R,CARBON 100H 1/10W
ROC166	79TH0190	R,CARBON 100H 1/10W
ROC167	79TH0213	R,CARBON 10K 1/10W
ROC168	79TH0224	R,CARBON 100K 1/10W
ROC169	79TH0223	R,CARBON 68K 1/10W
ROC170	79TH0220	R,CARBON 39K 1/10W
ROC171	79TH0213	R,CARBON 10K 1/10W
ROC172	79TH0206	R,CARBON 3.3K 1/10W
ROC173	79TH0212	R,CARBON 8.2K 1/10W
ROC174	79TH0222	R,CARBON 56K 1/10W
ROC175	79TH0214	R,CARBON 12K 1/10W
ROC178	79TH0200	R,CARBON 1K 1/10W
ROC179	79TH0224	R,CARBON 100K 1/10W
ROC180	79TH0217	R,CARBON 22K 1/10W
ROC181	79TH0204	R,CARBON 2.2K 1/10W
ROC191	79TH0219	R,CARBON 33K 1/10W
ROC192	79TH0230	R,CARBON 2200K 1/10W
ROC193	79TH0213	R,CARBON 10K 1/10W
ROC194	79TH0203	R,CARBON 1.8K 1/10W
ROC195	79TH0199	R,CARBON 820H 1/10W
ROC196	79TH0206	R,CARBON 3.3K 1/10W
ROC197	79TH0194	R,CARBON 330H 1/10W
ROC198	79TH0217	R,CARBON 22K 1/10W
ROC306	79TH0213	R,CARBON 10K 1/10W
ROC307	79TH0206	R,CARBON 3.3K 1/10W
ROC309	79TH0215	R,CARBON 15K 1/10W
ROC310	79TH0209	R,CARBON 4.7K 1/10W
ROC311	79TH0190	R,CARBON 100H 1/10W

SYMBOL	PARTS NO	DESCRIPTION
ROC312	79TH0200	R,CARBON 1K 1/10W
ROC313	79TH0213	R,CARBON 10K 1/10W
ROC314	79TH0213	R,CARBON 10K 1/10W
ROC316	79TH0215	R,CARBON 15K 1/10W
ROC317	79TH0209	R,CARBON 4.7K 1/10W
ROC318	79TH0190	R,CARBON 100H 1/10W
ROC319	79TH0200	R,CARBON 1K 1/10W
ROC320	79TH0213	R,CARBON 10K 1/10W
ROC321	79TH0213	R,CARBON 10K 1/10W
ROC322	79TH0217	R,CARBON 22K 1/10W
ROC323	79TH0190	R,CARBON 100H 1/10W
ROC324	79TH0210	R,CARBON 5.6K 1/10W
ROC325	79TH0224	R,CARBON 100K 1/10W
ROC326	79TH0224	R,CARBON 100K 1/10W
ROC327	79TH0231	R,CARBON 3300K 1/10W
ROC328	79TH0216	R,CARBON 18K 1/10W
ROC329	79TH0186	R,METAL 5.1K 1/4W
ROC330	79TH0200	R,CARBON 1K 1/10W
ROC331	79TH0197	R,CARBON 560H 1/10W
ROC332	79TH0202	R,CARBON 1.5K 1/10W
ROC333	79TH0209	R,CARBON 4.7K 1/10W
ROC334	79TH0224	R,CARBON 100K 1/10W
ROC335	79TH0218	R,CARBON 27K 1/10W
ROC336	79TH0217	R,CARBON 22K 1/10W
ROC337	79TH0200	R,CARBON 1K 1/10W
ROC339	79TH0225	R,CARBON 150K 1/10W
ROC340	79TH0218	R,CARBON 27K 1/10W
ROC341	79TH0200	R,CARBON 1K 1/10W
ROC342	79TH0192	R,CARBON 220H 1/10W
ROC343	79TH0202	R,CARBON 1.5K 1/10W
ROC344	79TH0194	R,CARBON 330H 1/10W
ROC345	79TH0206	R,CARBON 3.3K 1/10W
ROC347	79TH0204	R,CARBON 2.2K 1/10W
ROC348	79TH0200	R,CARBON 1K 1/10W
ROC349	79TH0203	R,CARBON 1.8K 1/10W
ROC350	79TH0205	R,CARBON 2.7K 1/10W
ROC351	79TH0204	R,CARBON 2.2K 1/10W
ROC352	79TH0200	R,CARBON 1K 1/10W
ROC353	79TH0200	R,CARBON 1K 1/10W
ROC354	79TH0204	R,CARBON 2.2K 1/10W

SYMBOL	PARTS NO	DESCRIPTION
ROC355	79TH0194	R,CARBON 330H 1/10W
ROC356	79TH0194	R,CARBON 330H 1/10W
ROC358	79TH0213	R,CARBON 10K 1/10W
ROC359	79TH0211	R,CARBON 6.8K 1/10W
ROC360	79TH0190	R,CARBON 100H 1/10W
ROC361	79TH0200	R,CARBON 1K 1/10W
ROC362	79TH0213	R,CARBON 10K 1/10W
ROC363	79TH0213	R,CARBON 10K 1/10W
ROC364	79TH0207	R,CARBON 3.9K 1/10W
ROC365	79TH0190	R,CARBON 100H 1/10W
ROC366	79TH0204	R,CARBON 2.2K 1/10W
ROC368	79TH0217	R,CARBON 22K 1/10W
ROC369	79TH0221	R,CARBON 47K 1/10W
ROC371	79TH0217	R,CARBON 22K 1/10W
ROC372	79TH0217	R,CARBON 22K 1/10W
ROC373	79TH0217	R,CARBON 22K 1/10W
ROC374	79TH0217	R,CARBON 22K 1/10W
ROC375	79TH0200	R,CARBON 1K 1/10W
ROC376	79TH0200	R,CARBON 1K 1/10W
ROC377	79TH0200	R,CARBON 1K 1/10W
ROC384	79TH0210	R,CARBON 5.6K 1/10W
ROC385	79TH0210	R,CARBON 5.6K 1/10W
ROC386	79TH0190	R,CARBON 100H 1/10W
ROC387	79TH0190	R,CARBON 100H 1/10W
ROC388	79TH0217	R,CARBON 22K 1/10W
ROC389	79TH0210	R,CARBON 5.6K 1/10W
ROC390	79TH0200	R,CARBON 1K 1/10W
ROC391	79TH0192	R,CARBON 220H 1/10W
ROC392	79TH0194	R,CARBON 330H 1/10W
ROC393	79TH0199	R,CARBON 820H 1/10W
ROC394	79TH0207	R,CARBON 3.9K 1/10W
ROC395	79TH0204	R,CARBON 2.2K 1/10W
ROC396	79TH0200	R,CARBON 1K 1/10W
ROC397	79TH0202	R,CARBON 1.5K 1/10W
ROC398	79TH0205	R,CARBON 2.7K 1/10W
ROC399	79TH0190	R,CARBON 100H 1/10W
ROC400	79TH0200	R,CARBON 1K 1/10W
ROC401	79TH0217	R,CARBON 22K 1/10W
ROC402	79TH0210	R,CARBON 5.6K 1/10W
ROC403	79TH0200	R,CARBON 1K 1/10W

SYMBOL	PARTS NO	DESCRIPTION
ROC404	79TH0192	R,CARBON 220H 1/10W
ROC405	79TH0194	R,CARBON 330H 1/10W
ROC406	79TH0199	R,CARBON 820H 1/10W
ROC407	79TH0207	R,CARBON 3.9K 1/10W
ROC408	79TH0204	R,CARBON 2.2K 1/10W
ROC409	79TH0200	R,CARBON 1K 1/10W
ROC410	79TH0202	R,CARBON 1.5K 1/10W
ROC411	79TH0205	R,CARBON 2.7K 1/10W
ROC412	79TH0190	R,CARBON 100H 1/10W
ROC413	79TH0200	R,CARBON 1K 1/10W
ROC414	79TH0202	R,CARBON 1.5K 1/10W
ROC415	79TH0200	R,CARBON 1K 1/10W
ROC416	79TH0201	R,CARBON 1.2K 1/10W
ROC420	79TH0202	R,CARBON 1.5K 1/10W
ROC421	79TH0213	R,CARBON 10K 1/10W
ROC422	79TH0210	R,CARBON 5.6K 1/10W
ROC423	79TH0202	R,CARBON 1.5K 1/10W
ROC424	79TH0204	R,CARBON 2.2K 1/10W
ROC425	79TH0190	R,CARBON 100H 1/10W
ROC426	79TH0202	R,CARBON 1.5K 1/10W
ROC427	79TH0200	R,CARBON 1K 1/10W
ROC428	79TH0194	R,CARBON 330H 1/10W
ROC429	79TH0202	R,CARBON 1.5K 1/10W
ROC431	79TH0206	R,CARBON 3.3K 1/10W
ROC435	79TH0202	R,CARBON 1.5K 1/10W
ROC436	79TH0213	R,CARBON 10K 1/10W
ROC437	79TH0210	R,CARBON 5.6K 1/10W
ROC438	79TH0202	R,CARBON 1.5K 1/10W
ROC439	79TH0204	R,CARBON 2.2K 1/10W
ROC440	79TH0190	R,CARBON 100H 1/10W
ROC441	79TH0202	R,CARBON 1.5K 1/10W
ROC442	79TH0200	R,CARBON 1K 1/10W
ROC443	79TH0201	R,CARBON 1.2K 1/10W
ROC444	79TH0212	R,CARBON 8.2K 1/10W
ROC445	79TH0202	R,CARBON 1.5K 1/10W
ROC446	79TH0213	R,CARBON 10K 1/10W
ROC447	79TH0210	R,CARBON 5.6K 1/10W
ROC448	79TH0202	R,CARBON 1.5K 1/10W
ROC449	79TH0204	R,CARBON 2.2K 1/10W
ROC450	79TH0190	R,CARBON 100H 1/10W

SYMBOL	PARTS NO	DESCRIPTION
ROC451	79TH0213	R,CARBON 10K 1/10W
ROC452	79TH0213	R,CARBON 10K 1/10W
ROC453	79TH0213	R,CARBON 10K 1/10W
ROC456	79TH0204	R,CARBON 2.2K 1/10W
ROC457	79TH0049	R,CARBON 100H 1/4W
ROC458	79TH0049	R,CARBON 100H 1/4W
ROC459	79TH0200	R,CARBON 1K 1/10W
ROC460	79TH0200	R,CARBON 1K 1/10W
ROC461	79TH0200	R,CARBON 1K 1/10W
ROC462	79TH0224	R,CARBON 100K 1/10W
ROC463	79TH0224	R,CARBON 100K 1/10W
ROC464	79TH0224	R,CARBON 100K 1/10W
ROC465	79TH0192	R,CARBON 220H 1/10W
ROC466	79TH0190	R,CARBON 100H 1/10W
ROC467	79TH0215	R,CARBON 15K 1/10W
ROC468	79TH0215	R,CARBON 15K 1/10W
ROC471	79TH0190	R,CARBON 100H 1/10W
ROC472	79TH0190	R,CARBON 100H 1/10W
ROC477	79TH0189	R,CARBON 0H 1/10W
ROC482	79TH0224	R,CARBON 100K 1/10W
ROC483	79TH0190	R,CARBON 100H 1/10W
ROC484	79TH0189	R,CARBON 0H 1/10W
ROC485	79TH0200	R,CARBON 1K 1/10W
ROC486	79TH0200	R,CARBON 1K 1/10W
ROC487	79TH0213	R,CARBON 10K 1/10W
ROC488	79TH0211	R,CARBON 6.8K 1/10W
ROC490	79TH0213	R,CARBON 10K 1/10W
ROC491	79TH0211	R,CARBON 6.8K 1/10W
ROC493	79TH0194	R,CARBON 330H 1/10W
ROC494	79TH0206	R,CARBON 3.3K 1/10W
ROC495	79TH0210	R,CARBON 5.6K 1/10W
ROD001	79TH0556	R,CARBON 100H 1/2W
ROD002	79TH0556	R,CARBON 100H 1/2W
ROD003	79TH0556	R,CARBON 100H 1/2W
ROD004	79TH0557	R,CARBON 1KH 1/2W
ROD005	79TH0557	R,CARBON 1KH 1/2W
ROD006	79TH0558	R,CARBON 100KH 1/2W
ROD007	79TH0554	R,CARBON 1KH 1/12W
ROD008	79TH0554	R,CARBON 1KH 1/12W
ROD009	79TH0050	R,CARBON 1KH 1/4W

SYMBOL	PARTS NO	DESCRIPTION
ROD010	79TH0072	R,CARBON 3.9K 1/4W
ROD011	79TH0559	R,CARBON 22KH 1/2W
ROD012	79TH0561	R,CARBON 56KH 1/2W
ROD013	79TH0560	R,CARBON 330K 1/2W
ROD014	79TH0050	R,CARBON 1KH 1/4W
ROD015	79TH0072	R,CARBON 3.9K 1/4W
ROD016	79TH0559	R,CARBON 22KH 1/2W
ROD017	79TH0561	R,CARBON 56KH 1/2W
ROD018	79TH0560	R,CARBON 330K 1/2W
ROD019	79TH0050	R,CARBON 1KH 1/4W
ROD020	79TH0072	R,CARBON 3.9K 1/4W
ROD021	79TH0559	R,CARBON 22KH 1/2W
ROD022	79TH0561	R,CARBON 56KH 1/2W
ROD023	79TH0560	R,CARBON 330K 1/2W
ROE001	79TH0140	R,CARBON 47H 1/2W
ROE002	79TH0090	R,CARBON 100H 1/4W
ROE003	79TH0091	R,CARBON 1KH 1/4W
ROE004	79TH0119	R,CARBON 470H 1/4W
ROE005	79TH0105	R,CARBON 22KH 1/4W
ROE006	79TH0091	R,CARBON 1KH 1/4W
ROE007	79TH0119	R,CARBON 470H 1/4W
ROE008	79TH0124	R,CARBON 5.6K 1/4W
ROE009	79TH0123	R,CARBON 560H 1/4W
ROE010	79TH0087	R,CARBON 1H 1/4W
ROE011	79TH0104	R,CARBON 2.2K 1/4W
ROE012	79TH0087	R,CARBON 1H 1/4W
ROE013	79TH0104	R,CARBON 2.2K 1/4W
ROE014	79TH0104	R,CARBON 2.2K 1/4W
ROE015	79TH0104	R,CARBON 2.2K 1/4W
ROE016	79TH0121	R,CARBON 47KH 1/4W
ROE017	79TH0104	R,CARBON 2.2K 1/4W
ROE018	79TH0088	R,CARBON 2.2H 1/4W
ROE019	79TH0091	R,CARBON 1KH 1/4W
ROE020	79TH0180	R,METAL 4.7K 2W
ROE021	79TH0174	R,METAL 2.2K 2W
ROE022	79TH0092	R,CARBON 10KH 1/4W
ROE023	79TH0172	R,METAL 15K 2W
ROE024	79TH0169	R,METAL 1.2K 2W
ROE025	79TH0113	R,CARBON 330H 1/4W
ROE026	79TH0178	R,METAL 3.9K 2W

SYMBOL	PARTS NO	DESCRIPTION
ROE027	79TH0182	R,METAL 560H 2W
ROE028	79TH0168	R,METAL 120H 2W
ROE029	79TH0139	R,CARBON 330H 1/2W
ROE030	79TH0118	R,CARBON 3.9K 1/4W
ROE031	79TH0091	R,CARBON 1KH 1/4W
ROE032	79TH0124	R,CARBON 5.6K 1/4W
ROE034	79TH0098	R,CARBON 1.5K 1/4W
ROE035	79TH0098	R,CARBON 1.5K 1/4W
ROE036	79TH0044	R,CARBON 100H 1/12W
ROE037	79TH0144	R,FUSE 0.47H 1W
ROE039	79TH0121	R,CARBON 47KH 1/4W
ROE040	79TH0134	R,CARBON 9.1K 1/4W
ROE041	79TH0097	R,CARBON 120K 1/4W
ROE042	79TH0103	R,CARBON 22H 1/4W
ROE043	79TH0104	R,CARBON 2.2K 1/4W
ROE044	79TH0106	R,CARBON 220K 1/4W
ROE045	79TH0105	R,CARBON 22KH 1/4W
ROE046	79TH0091	R,CARBON 1KH 1/4W
ROE047	79TH0091	R,CARBON 1KH 1/4W
ROE048	79TH0093	R,CARBON 100K 1/4W
ROE049	79TH0092	R,CARBON 10KH 1/4W
ROE050	79TH0114	R,CARBON 3.3K 1/4W
ROE051	79TH0091	R,CARBON 1KH 1/4W
ROE052	79TH0107	R,CARBON 2.2M 1/4W
ROE053	79TH0112	R,CARBON 27KH 1/4W
ROE054	79TH0091	R,CARBON 1KH 1/4W
ROE055	79TH0184	R,METAL 820H 2W
ROE056	79TH0168	R,METAL 120H 2W
ROE057	79TH0182	R,METAL 560H 2W
ROE058	79TH0120	R,CARBON 4.7K 1/4W
ROE059	79TH0092	R,CARBON 10KH 1/4W
ROE060	79TH0092	R,CARBON 10KH 1/4W
ROE061	79TH0117	R,CARBON 390H 1/4W
ROE062	79TH0092	R,CARBON 10KH 1/4W
ROE063	79TH0130	R,CARBON 6.8K 1/4W
ROE064	79TH0108	R,CARBON 24KH 1/4W
ROE066	79TH0091	R,CARBON 1KH 1/4W
ROE067	79TH0158	R,METAL 68H 2W
ROE068	79TH0158	R,METAL 68H 2W
ROE069	79TH0158	R,METAL 68H 2W

SYMBOL	PARTS NO	DESCRIPTION
ROE070	79TH0158	R,METAL 68H 2W
ROE071	79TH0158	R,METAL 68H 2W
ROE075	79TH0138	R,CARBON 220K 1/2W
ROE076	79TH0138	R,CARBON 220K 1/2W
ROE077	79TH0138	R,CARBON 220K 1/2W
ROE081	79TH0044	R,CARBON 100H 1/12W
ROE082	79TH0045	R,CARBON 1.5KH 1/12W
ROE083	79TH0175	R,METAL 270H 2W
ROE084	79TH0106	R,CARBON 220K 1/4W
ROE085	79TH0092	R,CARBON 10KH 1/4W
ROE086	79TH0104	R,CARBON 2.2K 1/4W
ROE087	79TH0142	R,FUSE 2.2H 1/2W
ROE088	79TH0142	R,FUSE 2.2H 1/2W
ROE089	79TH0142	R,FUSE 2.2H 1/2W
ROE090	79TH0142	R,FUSE 2.2H 1/2W
ROE091	79TH0138	R,CARBON 220K 1/2W
ROE092	79TH0138	R,CARBON 220K 1/2W
ROE093	79TH0138	R,CARBON 220K 1/2W
ROF001	79TH0092	R,CARBON 10KH 1/4W
ROF002	79TH0092	R,CARBON 10KH 1/4W
ROF003	79TH0092	R,CARBON 10KH 1/4W
ROF004	79TH0092	R,CARBON 10KH 1/4W
ROF005	79TH0092	R,CARBON 10KH 1/4W
ROF006	79TH0092	R,CARBON 10KH 1/4W
ROF007	79TH0092	R,CARBON 10KH 1/4W
ROF008	79TH0092	R,CARBON 10KH 1/4W
ROF009	79TH0092	R,CARBON 10KH 1/4W
ROF010	79TH0092	R,CARBON 10KH 1/4W
ROF011	79TH0092	R,CARBON 10KH 1/4W
ROF012	79TH0092	R,CARBON 10KH 1/4W
ROF013	79TH0120	R,CARBON 4.7K 1/4W
ROF014	79TH0096	R,CARBON 12KH 1/4W
ROF015	79TH0127	R,CARBON 6.2K 1/4W
ROF016	79TH0096	R,CARBON 12KH 1/4W
ROF017	79TH0133	R,CARBON 8.2K 1/4W
ROF018	79TH0101	R,CARBON 1.8K 1/4W
ROF019	79TH0092	R,CARBON 10KH 1/4W
ROF020	79TH0121	R,CARBON 47KH 1/4W
ROF021	79TH0120	R,CARBON 4.7K 1/4W
ROF022	79TH0092	R,CARBON 10KH 1/4W

SYMBOL	PARTS NO	DESCRIPTION
ROF023	79TH0091	R,CARBON 1KH 1/4W
ROF024	79TH0092	R,CARBON 10KH 1/4W
ROF025	79TH0129	R,CARBON 680H 1/4W
ROF026	79TH0101	R,CARBON 1.8K 1/4W
ROF027	79TH0101	R,CARBON 1.8K 1/4W
ROF028	79TH0091	R,CARBON 1KH 1/4W
ROF029	79TH0124	R,CARBON 5.6K 1/4W
ROF030	79TH0124	R,CARBON 5.6K 1/4W
ROF031	79TH0104	R,CARBON 2.2K 1/4W
ROF032	79TH0120	R,CARBON 4.7K 1/4W
ROF033	79TH0099	R,CARBON 15KH 1/4W
ROF034	79TH0118	R,CARBON 3.9K 1/4W
ROF035	79TH0124	R,CARBON 5.6K 1/4W
ROF036	79TH0091	R,CARBON 1KH 1/4W
ROF037	79TH0099	R,CARBON 15KH 1/4W
ROF038	79TH0099	R,CARBON 15KH 1/4W
ROF039	79TH0091	R,CARBON 1KH 1/4W
ROF040	79TH0128	R,CARBON 68H 1/4W
ROF041	79TH0128	R,CARBON 68H 1/4W
ROF042	79TH0169	R,METAL 1.2K 2W
ROF045	79TH0169	R,METAL 1.2K 2W
ROF046	79TH0166	R,METAL 1K 2W
ROF047	79TH0171	R,METAL 1.5K 2W
ROF048	79TH0177	R,METAL 3.3K 2W
ROF049	79TH0114	R,CARBON 3.3K 1/4W
ROF050	79TH0174	R,METAL 2.2K 2W
ROF051	79TH0183	R,METAL 620H 2W
ROF052	79TH0165	R,METAL 100H 2W
ROF053	79TH0120	R,CARBON 4.7K 1/4W
ROF054	79TH0174	R,METAL 2.2K 2W
ROF055	79TH0179	R,METAL 470H 2W
ROF056	79TH0166	R,METAL 1K 2W
ROF057	79TH0120	R,CARBON 4.7K 1/4W
ROF058	79TH0096	R,CARBON 12KH 1/4W
ROF059	79TH0120	R,CARBON 4.7K 1/4W
ROF060	79TH0124	R,CARBON 5.6K 1/4W
ROF061	79TH0099	R,CARBON 15KH 1/4W
ROF062	79TH0121	R,CARBON 47KH 1/4W
ROF063	79TH0096	R,CARBON 12KH 1/4W
ROF064	79TH0098	R,CARBON 1.5K 1/4W

SYMBOL	PARTS NO	DESCRIPTION
ROF065	79TH0090	R,CARBON 100H 1/4W
ROF066	79TH0105	R,CARBON 22KH 1/4W
ROF067	79TH0120	R,CARBON 4.7K 1/4W
ROF068	79TH0147	R,METAL 2.7K 1W
ROF069	79TH0119	R,CARBON 470H 1/4W
ROF070	79TH0145	R,METAL 10K 1W
ROF071	79TH0141	R,CARBON 560K 1/2W
ROF072	79TH0120	R,CARBON 4.7K 1/4W
ROF073	79TH0105	R,CARBON 22KH 1/4W
ROF074	79TH0120	R,CARBON 4.7K 1/4W
ROF075	79TH0120	R,CARBON 4.7K 1/4W
ROF076	79TH0112	R,CARBON 27KH 1/4W
ROF077	79TH0150	R,METAL 100K 3W
ROF078	79TH0102	R,CARBON 18K 1/4W
ROF079	79TH0104	R,CARBON 2.2K 1/4W
ROF080	79TH0120	R,CARBON 4.7K 1/4W
ROF081	79TH0120	R,CARBON 4.7K 1/4W
ROF082	79TH0120	R,CARBON 4.7K 1/4W
ROF083	79TH0120	R,CARBON 4.7K 1/4W
ROF084	79TH0110	R,CARBON 270H 1/4W
ROF085	79TH0114	R,CARBON 3.3K 1/4W
ROF086	79TH0123	R,CARBON 560H 1/4W
ROF087	79TH0091	R,CARBON 1KH 1/4W
ROF088	79TH0089	R,CARBON 3.3H 1/4W
ROF089	79TH0091	R,CARBON 1KH 1/4W
ROF090	79TH0123	R,CARBON 560H 1/4W
ROF091	79TH0123	R,CARBON 560H 1/4W
ROF092	79TH0123	R,CARBON 560H 1/4W
ROF093	79TH0101	R,CARBON 1.8K 1/4W
ROF094	79TH0101	R,CARBON 1.8K 1/4W
ROF095	79TH0130	R,CARBON 6.8K 1/4W
ROF096	79TH0091	R,CARBON 1KH 1/4W
ROF097	79TH0098	R,CARBON 1.5K 1/4W
ROF098	79TH0114	R,CARBON 3.3K 1/4W
ROF099	79TH0092	R,CARBON 10KH 1/4W
ROF100	79TH0124	R,CARBON 5.6K 1/4W
ROF101	79TH0131	R,CARBON 68K 1/4W
ROF102	79TH0120	R,CARBON 4.7K 1/4W
ROF103	79TH0130	R,CARBON 6.8K 1/4W
ROF104	79TH0111	R,CARBON 2.7K 1/4W

SYMBOL	PARTS NO	DESCRIPTION
ROF105	79TH0094	R,CARBONN 1MH 1/4W
ROF106	79TH0097	R,CARBON 120K 1/4W
ROF107	79TH0092	R,CARBON 10KH 1/4W
ROF108	79TH0092	R,CARBON 10KH 1/4W
ROF109	79TH0130	R,CARBON 6.8K 1/4W
ROF110	79TH0092	R,CARBON 10KH 1/4W
ROF111	79TH0096	R,CARBON 12KH 1/4W
ROF112	79TH0134	R,CARBON 9.1K 1/4W
ROF113	79TH0111	R,CARBON 2.7K 1/4W
ROF114	79TH0120	R,CARBON 4.7K 1/4W
ROF115	79TH0130	R,CARBON 6.8K 1/4W
ROF116	79TH0092	R,CARBON 10KH 1/4W
ROF117	79TH0092	R,CARBON 10KH 1/4W
ROF118	79TH0114	R,CARBON 3.3K 1/4W
ROF119	79TH0115	R,CARBON 33KH 1/4W
ROF120	79TH0122	R,CARBON 56H 1/4W
ROF121	79TH0124	R,CARBON 5.6K 1/4W
ROF122	79TH0114	R,CARBON 3.3K 1/4W
ROF123	79TH0091	R,CARBON 1KH 1/4W
ROF124	79TH0099	R,CARBON 15KH 1/4W
ROF125	79TH0122	R,CARBON 56H 1/4W
ROF126	79TH0122	R,CARBON 56H 1/4W
ROF127	79TH0091	R,CARBON 1KH 1/4W
ROF128	79TH0146	R,METAL 1.5K 1W
ROF129	79TH0146	R,METAL 1.5K 1W
ROF130	79TH0095	R,CARBON 120H 1/4W
ROF131	79TH0088	R,CARBON 2.2H 1/4W
ROF132	79TH0091	R,CARBON 1KH 1/4W
ROF133	79TH0091	R,CARBON 1KH 1/4W
ROF134	79TH0105	R,CARBON 22KH 1/4W
ROF135	79TH0135	R,CARBON 1H 1/2W
ROF136	79TH0135	R,CARBON 1H 1/2W
ROF137	79TH0091	R,CARBON 1KH 1/4W
ROF138	79TH0149	R,METAL 0.56K 2W
ROF139	79TH0118	R,CARBON 3.9K 1/4W
ROF140	79TH0092	R,CARBON 10KH 1/4W
ROF141	79TH0154	R,METAL 560K
ROF142	79TH0118	R,CARBON 3.9K 1/4W
ROF143	79TH0155	R,METAL 1H 2W
ROF144	79TH0136	R,CARBON 8.2H 1/2W

SYMBOL	PARTS NO	DESCRIPTION
ROF145	79TH0112	R,CARBON 27KH 1/4W
ROF146	79TH0124	R,CARBON 5.6K 1/4W
ROF147	79TH0092	R,CARBON 10KH 1/4W
ROF148	79TH0096	R,CARBON 12KH 1/4W
ROF149	79TH0124	R,CARBON 5.6K 1/4W
ROF150	79TH0091	R,CARBON 1KH 1/4W
ROF151	79TH0091	R,CARBON 1KH 1/4W
ROF152	79TH0091	R,CARBON 1KH 1/4W
ROF153	79TH0104	R,CARBON 2.2K 1/4W
ROF154	79TH0130	R,CARBON 6.8K 1/4W
ROF155	79TH0114	R,CARBON 3.3K 1/4W
ROF156	79TH0101	R,CARBON 1.8K 1/4W
ROF157	79TH0174	R,METAL 2.2K 2W
ROF158	79TH0171	R,METAL 1.5K 2W
ROF159	79TH0165	R,METAL 100H 2W
ROF160	79TH0170	R,METAL 150H 2W
ROF161	79TH0184	R,METAL 820H 2W
ROF162	79TH0104	R,CARBON 2.2K 1/4W
ROF163	79TH0170	R,METAL 150H 2W
ROF164	79TH0166	R,METAL 1K 2W
ROF165	79TH0181	R,METAL 510H 2W
ROF166	79TH0091	R,CARBON 1KH 1/4W
ROF167	79TH0092	R,CARBON 10KH 1/4W
ROF168	79TH0185	R,METAL 910H 2W
ROF169	79TH0185	R,METAL 910H 2W
ROF170	79TH0120	R,CARBON 4.7K 1/4W
ROF171	79TH0167	R,METAL 10K 2W
ROF172	79TH0103	R,CARBON 22H 1/4W
ROF173	79TH0091	R,CARBON 1KH 1/4W
ROF174	79TH0166	R,METAL 1K 2W
ROF175	79TH0175	R,METAL 270H 2W
ROF176	79TH0133	R,CARBON 8.2K 1/4W
ROF177	79TH0184	R,METAL 820H 2W
ROF178	79TH0176	R,METAL 330H 2W
ROF179	79TH0125	R,CARBON 56KH 1/4W
ROF180	79TH0104	R,CARBON 2.2K 1/4W
ROF181	79TH0114	R,CARBON 3.3K 1/4W
ROF182	79TH0091	R,CARBON 1KH 1/4W
ROF183	79TH0119	R,CARBON 470H 1/4W
ROF184	79TH0105	R,CARBON 22KH 1/4W

SYMBOL	PARTS NO	DESCRIPTION
ROF185	79TH0091	R,CARBON 1KH 1/4W
ROF186	79TH0104	R,CARBON 2.2K 1/4W
ROF187	79TH0104	R,CARBON 2.2K 1/4W
ROF188	79TH0093	R,CARBON 100K 1/4W
ROF189	79TH0091	R,CARBON 1KH 1/4W
ROF191	79TH0177	R,METAL 3.3K 2W
ROF192	79TH0172	R,METAL 15K 2W
ROF193	79TH0133	R,CARBON 8.2K 1/4W
ROF194	79TH0093	R,CARBON 100K 1/4W
ROF195	79TH0092	R,CARBON 10KH 1/4W
ROF196	79TH0092	R,CARBON 10KH 1/4W
ROF197	79TH0092	R,CARBON 10KH 1/4W
ROF198	79TH0092	R,CARBON 10KH 1/4W
ROF199	79TH0126	R,CARBON 560K 1/4W
ROF200	79TH0093	R,CARBON 100K 1/4W
ROF201	79TH0124	R,CARBON 5.6K 1/4W
ROF202	79TH0115	R,CARBON 33KH 1/4W
ROF203	79TH0092	R,CARBON 10KH 1/4W
ROF204	79TH0091	R,CARBON 1KH 1/4W
ROF205	79TH0092	R,CARBON 10KH 1/4W
ROF206	79TH0120	R,CARBON 4.7K 1/4W
ROF207	79TH0116	R,CARBON 330K 1/4W
ROF208	79TH0092	R,CARBON 10KH 1/4W
ROF209	79TH0116	R,CARBON 330K 1/4W
ROF210	79TH0093	R,CARBON 100K 1/4W
ROF211	79TH0092	R,CARBON 10KH 1/4W
ROF212	79TH0092	R,CARBON 10KH 1/4W
ROF213	79TH0092	R,CARBON 10KH 1/4W
ROF214	79TH0092	R,CARBON 10KH 1/4W
ROF215	79TH0126	R,CARBON 560K 1/4W
ROF216	79TH0106	R,CARBON 220K 1/4W
ROF217	79TH0124	R,CARBON 5.6K 1/4W
ROF218	79TH0132	R,CARBON 680K 1/4W
ROF219	79TH0092	R,CARBON 10KH 1/4W
ROF220	79TH0115	R,CARBON 33KH 1/4W
ROF221	79TH0130	R,CARBON 6.8K 1/4W
ROF222	79TH0092	R,CARBON 10KH 1/4W
ROF223	79TH0099	R,CARBON 15KH 1/4W
ROF224	79TH0092	R,CARBON 10KH 1/4W
ROF225	79TH0126	R,CARBON 560K 1/4W

SYMBOL	PARTS NO	DESCRIPTION
ROF226	79TH0093	R,CARBON 100K 1/4W
ROF227	79TH0124	R,CARBON 5.6K 1/4W
ROF228	79TH0092	R,CARBON 10KH 1/4W
ROF230	79TH0127	R,CARBON 6.2K 1/4W
ROF231	79TH0093	R,CARBON 100K 1/4W
ROF232	79TH0120	R,CARBON 4.7K 1/4W
ROF233	79TH0092	R,CARBON 10KH 1/4W
ROF234	79TH0094	R,CARBONN 1MH 1/4W
ROF235	79TH0130	R,CARBON 6.8K 1/4W
ROF236	79TH0100	R,CARBON 150KH 1/4W
ROF237	79TH0099	R,CARBON 15KH 1/4W
ROF238	79TH0092	R,CARBON 10KH 1/4W
ROF239	79TH0131	R,CARBON 68K 1/4W
ROF240	79TH0093	R,CARBON 100K 1/4W
ROF241	79TH0124	R,CARBON 5.6K 1/4W
ROF242	79TH0091	R,CARBON 1KH 1/4W
ROF245	79TH0086	R,CARBON 0H 1/4W
ROF246	79TH0091	R,CARBON 1KH 1/4W
ROF247	79TH0115	R,CARBON 33KH 1/4W
ROF248	79TH0092	R,CARBON 10KH 1/4W
ROF249	79TH0091	R,CARBON 1KH 1/4W
ROF250	79TH0119	R,CARBON 470H 1/4W
ROF251	79TH0115	R,CARBON 33KH 1/4W
ROF252	79TH0114	R,CARBON 3.3K 1/4W
ROF253	79TH0091	R,CARBON 1KH 1/4W
ROF254	79TH0091	R,CARBON 1KH 1/4W
ROF255	79TH0117	R,CARBON 390H 1/4W
ROF258	79TH0130	R,CARBON 6.8K 1/4W
ROF260	79TH0116	R,CARBON 330K 1/4W
ROF261	79TH0116	R,CARBON 330K 1/4W
ROF262	79TH0165	R,METAL 100H 2W
ROF263	79TH0170	R,METAL 150H 2W
ROF264	79TH0137	R,CARBON 10H 1/2W
ROF265	79TH0092	R,CARBON 10KH 1/4W
ROF266	79TH0098	R,CARBON 1.5K 1/4W
ROF267	79TH0092	R,CARBON 10KH 1/4W
ROF268	79TH0105	R,CARBON 22KH 1/4W
ROF269	79TH0092	R,CARBON 10KH 1/4W
ROF270	79TH0092	R,CARBON 10KH 1/4W
ROF271	79TH0105	R,CARBON 22KH 1/4W

SYMBOL	PARTS NO	DESCRIPTION
ROF272	79TH0182	R,METAL 560H 2W
ROF274	79TH0114	R,CARBON 3.3K 1/4W
ROF275	79TH0092	R,CARBON 10KH 1/4W
ROF276	79TH0092	R,CARBON 10KH 1/4W
ROF277	79TH0092	R,CARBON 10KH 1/4W
ROF278	79TH0091	R,CARBON 1KH 1/4W
ROF279	79TH0169	R,METAL 1.2K 2W
ROF281	79TH0142	R,FUSE 2.2H 1/2W
ROF282	79TH0093	R,CARBON 100K 1/4W
ROF283	79TH0091	R,CARBON 1KH 1/4W
ROF284	79TH0093	R,CARBON 100K 1/4W
ROF285	79TH0092	R,CARBON 10KH 1/4W
ROF286	79TH0092	R,CARBON 10KH 1/4W
ROF287	79TH0093	R,CARBON 100K 1/4W
ROF288	79TH0176	R,METAL 330H 2W
ROF289	79TH0130	R,CARBON 6.8K 1/4W
ROF290	79TH0130	R,CARBON 6.8K 1/4W
ROF291	79TH0132	R,CARBON 680K 1/4W
ROF292	79TH0109	R,CARBON 27H 1/4W
ROF293	79TH0173	R,METAL 18H 2W
ROG009	79TH0050	R,CARBON 1KH 1/4W
ROG010	79TH0050	R,CARBON 1KH 1/4W
ROG011	79TH0050	R,CARBON 1KH 1/4W
ROG012	79TH0050	R,CARBON 1KH 1/4W
ROG013	79TH0069	R,CARBON 3.3K 1/4W
ROG014	79TH0080	R,CARBON 56KH 1/4W
ROG016	79TH0159	R,METAL 1K 2W
ROG017	79TH0161	R,METAL 2.2K 2W
ROG018	79TH0074	R,CARBON 4.7K 1/4W
ROG019	79TH0057	R,CARBON 15KH 1/4W
ROG020	79TH0050	R,CARBON 1KH 1/4W
ROG021	79TH0081	R,CARBON 6.8K 1/4W
ROG022	79TH0057	R,CARBON 15KH 1/4W
ROG024	79TH0061	R,CARBON 2.2K 1/4W
ROG025	79TH0064	R,CARBON 270H 1/4W
ROG027	79TH0056	R,CARBON 1.5K 1/4W
ROG029	79TH0061	R,CARBON 2.2K 1/4W
ROG030	79TH0078	R,CARBON 560H 1/4W
ROG031	79TH0050	R,CARBON 1KH 1/4W
ROG032	79TH0077	R,CARBON 56H 1/4W

SYMBOL	PARTS NO	DESCRIPTION
ROG033	79TH0050	R,CARBON 1KH 1/4W
ROG034	79TH0078	R,CARBON 560H 1/4W
ROG035	79TH0056	R,CARBON 1.5K 1/4W
ROG036	79TH0078	R,CARBON 560H 1/4W
ROG037	79TH0078	R,CARBON 560H 1/4W
ROG038	79TH0061	R,CARBON 2.2K 1/4W
ROG039	79TH0069	R,CARBON 3.3K 1/4W
ROG040	79TH0053	R,CARBON 1.2K 1/4W
ROG041	79TH0069	R,CARBON 3.3K 1/4W
ROG042	79TH0053	R,CARBON 1.2K 1/4W
ROG043	79TH0050	R,CARBON 1KH 1/4W
ROG044	79TH0077	R,CARBON 56H 1/4W
ROG045	79TH0050	R,CARBON 1KH 1/4W
ROG046	79TH0053	R,CARBON 1.2K 1/4W
ROG047	79TH0078	R,CARBON 560H 1/4W
ROG048	79TH0078	R,CARBON 560H 1/4W
ROG049	79TH0058	R,CARBON 1.8K 1/4W
ROG050	79TH0058	R,CARBON 1.8K 1/4W
ROG051	79TH0079	R,CARBON 5.6K 1/4W
ROG052	79TH0054	R,CARBON 12KH 1/4W
ROG053	79TH0061	R,CARBON 2.2K 1/4W
ROG054	79TH0164	R,METAL 8.2K 2W
ROG055	79TH0162	R,METAL 5.6K 2W
ROG056	79TH0056	R,CARBON 1.5K 1/4W
ROG057	79TH0074	R,CARBON 4.7K 1/4W
ROG058	79TH0070	R,CARBON 33KH 1/4W
ROG059	79TH0159	R,METAL 1K 2W
ROG060	79TH0163	R,METAL 6.8K 2W
ROG061	79TH0062	R,CARBON 22KH 1/4W
ROG062	79TH0066	R,CARBON 27K 1/4W
ROG063	79TH0063	R,CARBON 220K 1/4W
ROG064	79TH0070	R,CARBON 33KH 1/4W
ROG065	79TH0061	R,CARBON 2.2K 1/4W
ROG066	79TH0062	R,CARBON 22KH 1/4W
ROG067	79TH0073	R,CARBON 39K 1/4W
ROG068	79TH0065	R,CARBON 2.7K 1/4W
ROG069	79TH0057	R,CARBON 15KH 1/4W
ROG070	79TH0049	R,CARBON 100H 1/4W
ROG071	79TH0052	R,CARBON 100K 1/4W
ROG072	79TH0052	R,CARBON 100K 1/4W

SYMBOL	PARTS NO	DESCRIPTION
ROG073	79TH0051	R,CARBON 10KH 1/4W
ROG074	79TH0050	R,CARBON 1KH 1/4W
ROG075	79TH0053	R,CARBON 1.2K 1/4W
ROG076	79TH0062	R,CARBON 22KH 1/4W
ROG077	79TH0078	R,CARBON 560H 1/4W
ROG078	79TH0051	R,CARBON 10KH 1/4W
ROG079	79TH0051	R,CARBON 10KH 1/4W
ROG080	79TH0074	R,CARBON 4.7K 1/4W
ROG081	79TH0074	R,CARBON 4.7K 1/4W
ROG082	79TH0548	R,METAL 1.0H 3W
ROG083	79TH0048	R,CARBON 2.2H 1/4W
ROG084	79TH0048	R,CARBON 2.2H 1/4W
ROG091	79TH0051	R,CARBON 10KH 1/4W
ROG092	79TH0080	R,CARBON 56KH 1/4W
ROG093	79TH0080	R,CARBON 56KH 1/4W
ROG094	79TH0051	R,CARBON 10KH 1/4W
ROG095	79TH0049	R,CARBON 100H 1/4W
ROG096	79TH0051	R,CARBON 10KH 1/4W
ROG097	79TH0069	R,CARBON 3.3K 1/4W
ROG098	79TH0061	R,CARBON 2.2K 1/4W
ROG099	79TH0051	R,CARBON 10KH 1/4W
ROG100	79TH0050	R,CARBON 1KH 1/4W
ROG101	79TH0050	R,CARBON 1KH 1/4W
ROG102	79TH0051	R,CARBON 10KH 1/4W
ROG103	79TH0080	R,CARBON 56KH 1/4W
ROG104	79TH0068	R,CARBON 330H 1/4W
ROH001	79TH0060	R,CARBON 22H 1/4W
ROH002	79TH0153	R,METAL 2.2K
ROH003	79TH0153	R,METAL 2.2K
ROH004	79TH0151	R,METAL 180K 3W
ROH005	79TH0151	R,METAL 180K 3W
ROH006	79TH0151	R,METAL 180K 3W
ROH007	79TH0156	R,METAL 2.7H 3W
ROH008	79TH0156	R,METAL 2.7H 3W
ROH009	79TH0156	R,METAL 2.7H 3W
ROH012	79TH0084	R,CARBON 2.2K 1/2W
ROH013	79TH0157	R,METAL 3.3H 3W
ROH014	79TH0084	R,CARBON 2.2K 1/2W
ROH015	79TH0083	R,CARBON 1.5K 1/2W
ROH016	79TH0050	R,CARBON 1KH 1/4W

SYMBOL	PARTS NO	DESCRIPTION
ROH017	79TH0054	R,CARBON 12KH 1/4W
ROH018	79TH0059	R,CARBON 18K 1/4W
ROH019	79TH0072	R,CARBON 3.9K 1/4W
ROH020	79TH0074	R,CARBON 4.7K 1/4W
ROH021	79TH0063	R,CARBON 220K 1/4W
ROH022	79TH0069	R,CARBON 3.3K 1/4W
ROH023	79TH0062	R,CARBON 22KH 1/4W
ROH024	79TH0082	R,CARBON 9.1K 1/4W
ROH025	79TH0085	R,CARBON 91H 1/2W
ROH026	79TH0063	R,CARBON 220K 1/4W
ROH027	79TH0051	R,CARBON 10KH 1/4W
ROH028	79TH0061	R,CARBON 2.2K 1/4W
ROH030	79TH0152	R,METAL 220K 3W
ROH031	79TH0152	R,METAL 220K 3W
ROH032	79TH0062	R,CARBON 22KH 1/4W
ROH033	79TH0059	R,CARBON 18K 1/4W
ROH034	79TH0054	R,CARBON 12KH 1/4W
ROH035	79TH0057	R,CARBON 15KH 1/4W
ROH036	79TH0076	R,CARBON 5.1K 1/4W
ROH037	79TH0079	R,CARBON 5.6K 1/4W
ROH038	79TH0067	R,CARBON 270K 1/4W
ROH039	79TH0051	R,CARBON 10KH 1/4W
ROH040	79TH0050	R,CARBON 1KH 1/4W
ROH041	79TH0061	R,CARBON 2.2K 1/4W
ROH042	79TH0051	R,CARBON 10KH 1/4W
ROH043	79TH0079	R,CARBON 5.6K 1/4W
ROH044	79TH0081	R,CARBON 6.8K 1/4W
ROH046	79TH0050	R,CARBON 1KH 1/4W
ROH047	79TH0051	R,CARBON 10KH 1/4W
ROH048	79TH0054	R,CARBON 12KH 1/4W
ROH049	79TH0075	R,CARBON 470K 1/4W
ROH050	79TH0062	R,CARBON 22KH 1/4W
ROH051	79TH0050	R,CARBON 1KH 1/4W
ROH052	79TH0052	R,CARBON 100K 1/4W
ROH053	79TH0051	R,CARBON 10KH 1/4W
ROH054	79TH0069	R,CARBON 3.3K 1/4W
ROH055	79TH0050	R,CARBON 1KH 1/4W
ROH056	79TH0050	R,CARBON 1KH 1/4W
ROH057	79TH0063	R,CARBON 220K 1/4W
ROH058	79TH0061	R,CARBON 2.2K 1/4W

SYMBOL	PARTS NO	DESCRIPTION
ROH059	79TH0060	R,CARBON 22H 1/4W
ROH060	79TH0082	R,CARBON 9.1K 1/4W
ROH061	79TH0055	R,CARBON 120K 1/4W
ROH062	79TH0070	R,CARBON 33KH 1/4W
ROH063	79TH0144	R,FUSE 0.47H 1W
ROH064	79TH0062	R,CARBON 22KH 1/4W
ROH065	79TH0051	R,CARBON 10KH 1/4W
ROH066	79TH0050	R,CARBON 1KH 1/4W
ROH067	79TH0081	R,CARBON 6.8K 1/4W
ROH068	79TH0061	R,CARBON 2.2K 1/4W
ROH069	79TH0050	R,CARBON 1KH 1/4W
ROH070	79TH0081	R,CARBON 6.8K 1/4W
ROH071	79TH0061	R,CARBON 2.2K 1/4W
ROH072	79TH0050	R,CARBON 1KH 1/4W
ROH073	79TH0081	R,CARBON 6.8K 1/4W
ROH074	79TH0061	R,CARBON 2.2K 1/4W
ROH075	79TH0050	R,CARBON 1KH 1/4W
ROH076	79TH0081	R,CARBON 6.8K 1/4W
ROH077	79TH0061	R,CARBON 2.2K 1/4W
ROH078	79TH0050	R,CARBON 1KH 1/4W
ROH079	79TH0081	R,CARBON 6.8K 1/4W
ROH080	79TH0061	R,CARBON 2.2K 1/4W
ROH081	79TH0050	R,CARBON 1KH 1/4W
ROH082	79TH0081	R,CARBON 6.8K 1/4W
ROH083	79TH0061	R,CARBON 2.2K 1/4W
ROJ001	79TH0575	R,FUSE 15KH
ROJ004	79TH0579	R,METAL 56KH 1W
ROJ005	79TH0579	R,METAL 56KH 1W
ROJ006	79TH0580	R,METAL 68KH 1W
ROJ007	79TH0580	R,METAL 68KH 1W
ROJ008	79TH0573	R,FUSE 2.7K 1/2W
ROJ009	79TH0573	R,FUSE 2.7K 1/2W
ROJ010	79TH0572	R,FUSE 22H 1/2W
ROJ011	79TH0125	R,CARBON 56KH 1/4W
ROJ012	79TH0125	R,CARBON 56KH 1/4W
ROJ013	79TH0092	R,CARBON 10KH 1/4W
ROJ014	79TH0564	R,CARBON 220H 1/4W
ROJ015	79TH0574	R,FUSE 0.51H
ROJ016	79TH0564	R,CARBON 220H 1/4W
ROJ017	79TH0121	R,CARBON 47KH 1/4W

SYMBOL	PARTS NO	DESCRIPTION
ROJ018	79TH0570	R,FUSE 1.5H 1/2W
ROJ019	79TH0120	R,CARBON 4.7K 1/4W
ROJ020	79TH0566	R,CARBON 82H 1/4W
ROJ021	79TH0604	R,METAL 1H 7W
ROJ022	79TH0604	R,METAL 1H 7W
ROJ023	79TH0584	R,METAL 47H 3W
ROJ024	79TH0585	R,METAL 82KH 3W
ROJ025	79TH0564	R,CARBON 220H 1/4W
ROJ026	79TH0121	R,CARBON 47KH 1/4W
ROJ027	79TH0570	R,FUSE 1.5H 1/2W
ROJ028	79TH0570	R,FUSE 1.5H 1/2W
ROJ029	79TH0091	R,CARBON 1KH 1/4W
ROJ030	79TH0566	R,CARBON 82H 1/4W
ROJ031	79TH0605	R,METAL 0.68H 7W
ROJ032	79TH0605	R,METAL 0.68H 7W
ROJ033	79TH0605	R,METAL 0.68H 7W
ROJ034	79TH0605	R,METAL 0.68H 7W
ROJ035	79TH0584	R,METAL 47H 3W
ROJ036	79TH0583	R,METAL 82KH 2W
ROJ037	79TH0574	R,FUSE 0.51H
ROJ040	79TH0576	R,METAL 2.2KH 1W
ROJ041	79TH0592	R,METAL 20H 2W
ROJ042	79TH0175	R,METAL 270H 2W
ROJ043	79TH0565	R,CARBON 510H 1/4W
ROJ044	79TH0129	R,CARBON 680H 1/4W
ROJ045	79TH0091	R,CARBON 1KH 1/4W
ROJ046	79TH0091	R,CARBON 1KH 1/4W
ROJ047	79TH0567	R,CARBON 820H 1/4W
ROJ048	79TH0111	R,CARBON 2.7K 1/4W
ROJ049	79TH0165	R,METAL 100H 2W
ROJ050	79TH0593	R,METAL 22H 2W
ROJ051	79TH0601	R,METAL 6.8H 2W
ROJ055	79TH0165	R,METAL 100H 2W
ROJ056	79TH0596	R,METAL 33H 2W
ROJ063	79TH0121	R,CARBON 47KH 1/4W
ROJ064	79TH0120	R,CARBON 4.7K 1/4W
ROJ065	79TH0120	R,CARBON 4.7K 1/4W
ROJ067	79TH0564	R,CARBON 220H 1/4W
ROJ068	79TH0564	R,CARBON 220H 1/4W
ROJ069	79TH0092	R,CARBON 10KH 1/4W

SYMBOL	PARTS NO	DESCRIPTION
ROJ070	79TH0129	R,CARBON 680H 1/4W
ROJ071	79TH0582	R,METAL 56H 2W
ROJ072	79TH0184	R,METAL 820H 2W
ROJ073	79TH0589	R,METAL 15H 2W
ROJ074	79TH0598	R,METAL 39H 2W
ROJ083	79TH0582	R,METAL 56H 2W
ROJ084	79TH0577	R,METAL 22KH 1W
ROJ085	79TH0577	R,METAL 22KH 1W
ROJ086	79TH0588	R,METAL 1.5KH 1/2W
ROJ087	79TH0588	R,METAL 1.5KH 1/2W
ROJ088	79TH0588	R,METAL 1.5KH 1/2W
ROJ089	79TH0600	R,METAL 51H 2W
ROJ090	79TH0595	R,METAL 3.3H 2W
ROJ091	79TH0170	R,METAL 150H 2W
ROJ092	79TH0599	R,METAL 47H 2W
ROJ093	79TH0599	R,METAL 47H 2W
ROJ094	79TH0599	R,METAL 47H 2W
ROJ095	79TH0091	R,CARBON 1KH 1/4W
ROJ096	79TH0587	R,METAL 1.2KH 1/2W
ROJ097	79TH0587	R,METAL 1.2KH 1/2W
ROJ098	79TH0587	R,METAL 1.2KH 1/2W
ROJ100	79TH0586	R,METAL 1KH 1/2W
ROJ101	79TH0586	R,METAL 1KH 1/2W
ROJ102	79TH0586	R,METAL 1KH 1/2W
ROJ103	79TH0594	R,METAL 27H 2W
ROJ105	79TH0114	R,CARBON 3.3K 1/4W
ROJ106	79TH0123	R,CARBON 560H 1/4W
ROJ112	79TH0578	R,METAL 56H 1W
ROJ114	79TH0583	R,METAL 82KH 2W
ROJ115	79TH0569	R,CARBON 820H 1/2W
ROJ116	79TH0569	R,CARBON 820H 1/2W
ROJ117	79TH0168	R,METAL 120H 2W
ROJ201	79TH0555	R,CARBON 470KH 1/12W
ROL001	79TH0180	R,METAL 4.7K 2W
ROL002	79TH0180	R,METAL 4.7K 2W
ROL003	79TH0104	R,CARBON 2.2K 1/4W
ROL004	79TH0093	R,CARBON 100K 1/4W
ROL005	79TH0091	R,CARBON 1KH 1/4W
ROL007	79TH0102	R,CARBON 18K 1/4W
ROL008	79TH0121	R,CARBON 47KH 1/4W

SYMBOL	PARTS NO	DESCRIPTION
ROL009	79TH0591	R,METAL 1.8KH 2W
ROL010	79TH0602	R,METAL 68H 2W
ROL016	79TH0104	R,CARBON 2.2K 1/4W
ROL017	79TH0180	R,METAL 4.7K 2W
ROL018	79TH0180	R,METAL 4.7K 2W
ROL019	79TH0119	R,CARBON 470H 1/4W
ROL020	79TH0114	R,CARBON 3.3K 1/4W
ROL021	79TH0114	R,CARBON 3.3K 1/4W
ROL022	79TH0597	R,METAL 36H 2W
ROL024	79TH0590	R,METAL 180H 2W
ROL025	79TH0590	R,METAL 180H 2W
⚠ROM002	79TH0143	R,FUSE 33H 1/2W
⚠ROM003	79TH0143	R,FUSE 33H 1/2W
⚠ROM004	79TH0143	R,FUSE 33H 1/2W
RON001	79TH0148	R,METAL 33K 1W
RON002	79TH0148	R,METAL 33K 1W
RON003	79TH0057	R,CARBON 15KH 1/4W
RON004	79TH0075	R,CARBON 470K 1/4W
RON005	79TH0075	R,CARBON 470K 1/4W
RON006	79TH0160	R,METAL 12K 2W
RON007	79TH0069	R,CARBON 3.3K 1/4W
RON008	79TH0071	R,CARBON 390H 1/4H
ROP001	79TH0050	R,CARBON 1KH 1/4W
ROP002	79TH0061	R,CARBON 2.2K 1/4W
ROP003	79TH0049	R,CARBON 100H 1/4W

*** CAPACITORS ***

COA001	79TH0825	C,ELEC 10UF 16V
COA002	79TH0825	C,ELEC 10UF 16V
COA003	79TH0825	C,ELEC 10UF 16V
COA004	79TH0825	C,ELEC 10UF 16V
COA005	79TH0293	C,CERAMIC 0.01UF 50V
COA006	79TH0293	C,CERAMIC 0.01UF 50V
COA007	79TH0825	C,ELEC 10UF 16V
COA008	79TH0293	C,CERAMIC 0.01UF 50V
COA009	79TH0293	C,CERAMIC 0.01UF 50V
COA010	79TH0825	C,ELEC 10UF 16V
COA011	79TH0293	C,CERAMIC 0.01UF 50V
COA012	79TH0293	C,CERAMIC 0.01UF 50V

SYMBOL	PARTS NO	DESCRIPTION
COA013	79TH0825	C,ELEC 10UF 16V
COA014	79TH0825	C,ELEC 10UF 16V
COA015	79TH0825	C,ELEC 10UF 16V
COA016	79TH0825	C,ELEC 10UF 16V
COA017	79TH0293	C,CERAMIC 0.01UF 50V
COA018	79TH0293	C,CERAMIC 0.01UF 50V
COA019	79TH0655	C,ELEC 47UF 16V
COA020	79TH0278	C,FILM 0.1UF 50V
COA021	79TH0293	C,CERAMIC 0.01UF 50V
COA022	79TH0825	C,ELEC 10UF 16V
COA023	79TH0293	C,CERAMIC 0.01UF 50V
COA024	79TH0278	C,FILM 0.1UF 50V
COA025	79TH0293	C,CERAMIC 0.01UF 50V
COA026	79TH0825	C,ELEC 10UF 16V
COA027	79TH0293	C,CERAMIC 0.01UF 50V
COA028	79TH0278	C,FILM 0.1UF 50V
COA029	79TH0293	C,CERAMIC 0.01UF 50V
COA030	79TH0655	C,ELEC 47UF 16V
COA031	79TH0293	C,CERAMIC 0.01UF 50V
COA032	79TH0293	C,CERAMIC 0.01UF 50V
COA033	79TH0655	C,ELEC 47UF 16V
COA034	79TH0293	C,CERAMIC 0.01UF 50V
COA035	79TH0293	C,CERAMIC 0.01UF 50V
COA036	79TH0655	C,ELEC 47UF 16V
COA037	79TH0293	C,CERAMIC 0.01UF 50V
COA038	79TH0293	C,CERAMIC 0.01UF 50V
COA040	79TH0293	C,CERAMIC 0.01UF 50V
COA041	79TH0293	C,CERAMIC 0.01UF 50V
COA042	79TH0653	C,ELEC 47UF 16V
COA043	79TH0825	C,ELEC 10UF 16V
COA044	79TH0638	C,CERAMIC 0.022UF 50V
COA045	79TH0653	C,ELEC 47UF 16V
COA046	79TH0825	C,ELEC 10UF 16V
COA047	79TH0293	C,CERAMIC 0.01UF 50V
COA048	79TH0653	C,ELEC 47UF 16V
COA049	79TH0825	C,ELEC 10UF 16V
COA050	79TH0293	C,CERAMIC 0.01UF 50V
COA051	79TH0646	C,CERAMIC 33PF 50V
COA052	79TH0647	C,CERAMIC 56PF 50V

SYMBOL	PARTS NO	DESCRIPTION
COA053	79TH0644	C,CERAMIC 8PF 50V
COA054	79TH0293	C,CERAMIC 0.01UF 50V
COA055	79TH0653	C,ELEC 47UF 16V
COA056	79TH0646	C,CERAMIC 33PF 50V
COA057	79TH0647	C,CERAMIC 56PF 50V
COA058	79TH0644	C,CERAMIC 8PF 50V
COA059	79TH0293	C,CERAMIC 0.01UF 50V
COA060	79TH0653	C,ELEC 47UF 16V
COA061	79TH0646	C,CERAMIC 33PF 50V
COA062	79TH0647	C,CERAMIC 56PF 50V
COA063	79TH0644	C,CERAMIC 8PF 50V
COA064	79TH0293	C,CERAMIC 0.01UF 50V
COA065	79TH0653	C,ELEC 47UF 16V
COA066	79TH0293	C,CERAMIC 0.01UF 50V
COA068	79TH0634	C,CERAMIC 220PF 50V
COA069	79TH0276	C,FILM 0.1UF 250V
⚠COA070	79TH0654	C,ELEC 10UF 250V
COA075	79TH0825	C,ELEC 10UF 16V
COA077	79TH0634	C,CERAMIC 220PF 50V
COA078	79TH0276	C,FILM 0.1UF 250V
⚠COA079	79TH0654	C,ELEC 10UF 250V
COA084	79TH0825	C,ELEC 10UF 16V
COA086	79TH0634	C,CERAMIC 220PF 50V
COA087	79TH0276	C,FILM 0.1UF 250V
⚠COA088	79TH0654	C,ELEC 10UF 250V
COA093	79TH0825	C,ELEC 10UF 16V
COA094	79TH0825	C,ELEC 10UF 16V
COA095	79TH0825	C,ELEC 10UF 16V
COA096	79TH0825	C,ELEC 10UF 16V
COA097	79TH0825	C,ELEC 10UF 16V
COA098	79TH0825	C,ELEC 10UF 16V
COA099	79TH0293	C,CERAMIC 0.01UF 50V
COA100	79TH0655	C,ELEC 47UF 16V
COA101	79TH0825	C,ELEC 10UF 16V
COA102	79TH0825	C,ELEC 10UF 16V
COA103	79TH0669	C,ELEC 1UF 50V
COA104	79TH0669	C,ELEC 1UF 50V
COA105	79TH0293	C,CERAMIC 0.01UF 50V
COA106	79TH0655	C,ELEC 47UF 16V
COA107	79TH0655	C,ELEC 47UF 16V

SYMBOL	PARTS NO	DESCRIPTION
COA108	79TH0655	C,ELEC 47UF 16V
COA109	79TH0669	C,ELEC 1UF 50V
COA110	79TH0669	C,ELEC 1UF 50V
COA111	79TH0669	C,ELEC 1UF 50V
COA112	79TH0623	C,FILM 4700PF 50V
COA113	79TH0278	C,FILM 0.1UF 50V
COA114	79TH0825	C,ELEC 10UF 16V
COA115	79TH0293	C,CERAMIC 0.01UF 50V
COA116	79TH0633	C,CERAMIC 150PF 50V
COA117	79TH0293	C,CERAMIC 0.01UF 50V
COA118	79TH0653	C,ELEC 47UF 16V
COA119	79TH0293	C,CERAMIC 0.01UF 50V
COA120	79TH0655	C,ELEC 47UF 16V
COA121	79TH0645	C,CERAMIC 10PF 50V
COA122	79TH0635	C,CERAMIC 390PF 50V
COA123	79TH0653	C,ELEC 47UF 16V
COA124	79TH0293	C,CERAMIC 0.01UF 50V
COA125	79TH0657	C,ELEC 1UF 50V
COA126	79TH0293	C,CERAMIC 0.01UF 50V
COA127	79TH0653	C,ELEC 47UF 16V
COA128	79TH0633	C,CERAMIC 150PF 50V
COA129	79TH0278	C,FILM 0.1UF 50V
COA130	79TH0278	C,FILM 0.1UF 50V
COA131	79TH0656	C,ELEC 10UF 25V
COA132	79TH0278	C,FILM 0.1UF 50V
COA133	79TH0653	C,ELEC 47UF 16V
COA134	79TH0293	C,CERAMIC 0.01UF 50V
COA135	79TH0657	C,ELEC 1UF 50V
COA136	79TH0293	C,CERAMIC 0.01UF 50V
COA137	79TH0653	C,ELEC 47UF 16V
COA138	79TH0293	C,CERAMIC 0.01UF 50V
COA139	79TH0653	C,ELEC 47UF 16V
COA140	79TH0293	C,CERAMIC 0.01UF 50V
COA141	79TH0293	C,CERAMIC 0.01UF 50V
COA142	79TH0293	C,CERAMIC 0.01UF 50V
COA143	79TH0826	C,ELEC 47UF 25V
COA144	79TH0293	C,CERAMIC 0.01UF 50V
COA145	79TH0653	C,ELEC 47UF 16V
COA146	79TH0826	C,ELEC 47UF 25V
COA147	79TH0293	C,CERAMIC 0.01UF 50V
COA148	79TH0653	C,ELEC 47UF 16V
COA149	79TH0653	C,ELEC 47UF 16V
COA150	79TH0826	C,ELEC 47UF 25V
COA151	79TH0293	C,CERAMIC 0.01UF 50V
COA152	79TH0293	C,CERAMIC 0.01UF 50V
COA153	79TH0671	C,ELEC 10UF 16V
COA154	79TH0671	C,ELEC 10UF 16V
COA155	79TH0671	C,ELEC 10UF 16V
COA156	79TH0643	C,CERAMIC 5PF 50V
COA157	79TH0643	C,CERAMIC 5PF 50V
COA158	79TH0643	C,CERAMIC 5PF 50V
COA159	79TH0293	C,CERAMIC 0.01UF 50V
COA160	79TH0278	C,FILM 0.1UF 50V
COA161	79TH0293	C,CERAMIC 0.01UF 50V
COA165	79TH0825	C,ELEC 10UF 16V
COA166	79TH0825	C,ELEC 10UF 16V
COA167	79TH0825	C,ELEC 10UF 16V
COA168	79TH0825	C,ELEC 10UF 16V
COA169	79TH0825	C,ELEC 10UF 16V
COA170	79TH0632	C,CERAMIC 100PF 50V
COA301	79TH0655	C,ELEC 47UF 16V
COA302	79TH0655	C,ELEC 47UF 16V
COA303	79TH0293	C,CERAMIC 0.01UF 50V
COA304	79TH0293	C,CERAMIC 0.01UF 50V
COA305	79TH0655	C,ELEC 47UF 16V
COA306	79TH0655	C,ELEC 47UF 16V
COA307	79TH0655	C,ELEC 47UF 16V
COA308	79TH0293	C,CERAMIC 0.01UF 50V
COA309	79TH0293	C,CERAMIC 0.01UF 50V
COA310	79TH0655	C,ELEC 47UF 16V
COA311	79TH0293	C,CERAMIC 0.01UF 50V
COA312	79TH0293	C,CERAMIC 0.01UF 50V
COA313	79TH0293	C,CERAMIC 0.01UF 50V
COA314	79TH0293	C,CERAMIC 0.01UF 50V
COA315	79TH0655	C,ELEC 47UF 16V
COA316	79TH0825	C,ELEC 10UF 16V
COA317	79TH0825	C,ELEC 10UF 16V
COA318	79TH0825	C,ELEC 10UF 16V
COA319	79TH0825	C,ELEC 10UF 16V
COA320	79TH0825	C,ELEC 10UF 16V
COA321	79TH0825	C,ELEC 10UF 16V
COA322	79TH0655	C,ELEC 47UF 16V
COA323	79TH0655	C,ELEC 47UF 16V
COA324	79TH0655	C,ELEC 47UF 16V
COA325	79TH0293	C,CERAMIC 0.01UF 50V
COA326	79TH0655	C,ELEC 47UF 16V
COA327	79TH0293	C,CERAMIC 0.01UF 50V
COA328	79TH0293	C,CERAMIC 0.01UF 50V
COA329	79TH0293	C,CERAMIC 0.01UF 50V
COA330	79TH0671	C,ELEC 10UF 16V
COA331	79TH0671	C,ELEC 10UF 16V
COA332	79TH0825	C,ELEC 10UF 16V
COA333	79TH0825	C,ELEC 10UF 16V
COB001	79TH0356	C,CERAMIC 33PF 50V
COB002	79TH0356	C,CERAMIC 33PF 50V
COB003	79TH0364	C,ELEC 10UF 16V
COB004	79TH0673	C,TANTAL 0.47UF 16V
COB005	79TH0672	C,CERAMIC 2700PF 50V
COB006	79TH0673	C,TANTAL 0.47UF 16V
COB007	79TH0363	C,CERAMIC 0.1UF 50V
COB008	79TH0675	C,ELEC 10UF 25V
COB009	79TH0675	C,ELEC 10UF 25V
COB010	79TH0675	C,ELEC 10UF 25V
COB011	79TH0675	C,ELEC 10UF 25V
COB012	79TH0674	C,ELEC 47UF 16V
COB013	79TH0363	C,CERAMIC 0.1UF 50V
COB014	79TH0676	C,ELEC 22UF 25V
COB015	79TH0363	C,CERAMIC 0.1UF 50V
COB016	79TH0674	C,ELEC 47UF 16V
COB017	79TH0674	C,ELEC 47UF 16V
COB018	79TH0365	C,ELEC 22UF 16V
COB019	79TH0364	C,ELEC 10UF 16V
COB020	79TH0365	C,ELEC 22UF 16V
COB021	79TH0363	C,CERAMIC 0.1UF 50V
COB022	79TH0363	C,CERAMIC 0.1UF 50V
COB023	79TH0363	C,CERAMIC 0.1UF 50V
COB024	79TH0363	C,CERAMIC 0.1UF 50V
COB025	79TH0363	C,CERAMIC 0.1UF 50V
COB026	79TH0363	C,CERAMIC 0.1UF 50V
COB027	79TH0363	C,CERAMIC 0.1UF 50V
COB028	79TH0363	C,CERAMIC 0.1UF 50V
COB029	79TH0363	C,CERAMIC 0.1UF 50V
COB030	79TH0363	C,CERAMIC 0.1UF 50V
COB031	79TH0363	C,CERAMIC 0.1UF 50V
COB032	79TH0363	C,CERAMIC 0.1UF 50V
COB033	79TH0363	C,CERAMIC 0.1UF 50V
COB034	79TH0363	C,CERAMIC 0.1UF 50V
COB035	79TH0363	C,CERAMIC 0.1UF 50V
COB036	79TH0363	C,CERAMIC 0.1UF 50V
COB037	79TH0363	C,CERAMIC 0.1UF 50V
COB038	79TH0363	C,CERAMIC 0.1UF 50V
COB039	79TH0363	C,CERAMIC 0.1UF 50V
COB040	79TH0363	C,CERAMIC 0.1UF 50V
COB041	79TH0363	C,CERAMIC 0.1UF 50V
COB042	79TH0363	C,CERAMIC 0.1UF 50V
COB043	79TH0363	C,CERAMIC 0.1UF 50V
COB044	79TH0363	C,CERAMIC 0.1UF 50V
COB045	79TH0363	C,CERAMIC 0.1UF 50V
COB046	79TH0363	C,CERAMIC 0.1UF 50V
COB047	79TH0363	C,CERAMIC 0.1UF 50V
COB048	79TH0363	C,CERAMIC 0.1UF 50V
COB049	79TH0363	C,CERAMIC 0.1UF 50V
COB050	79TH0363	C,CERAMIC 0.1UF 50V
COB051	79TH0363	C,CERAMIC 0.1UF 50V
COB052	79TH0363	C,CERAMIC 0.1UF 50V
COB053	79TH0363	C,CERAMIC 0.1UF 50V
COB054	79TH0365	C,ELEC 22UF 16V
COC001	79TH0364	C,ELEC 10UF 16V
COC002	79TH0352	C,CERAMIC 5PF 50V
COC003	79TH0549	C,CERAMIC 0.01UF 50V
COC004	79TH0365	C,ELEC 22UF 16V
COC005	79TH0365	C,ELEC 22UF 16V
COC006	79TH0353	C,CERAMIC 10PF 50V
COC007	79TH0363	C,CERAMIC 0.1UF 50V
COC008	79TH0364	C,ELEC 10UF 16V
COC009	79TH0549	C,CERAMIC 0.01UF 50V
COC010	79TH0363	C,CERAMIC 0.1UF 50V
COC011	79TH0363	C,CERAMIC 0.1UF 50V
COC012	79TH0364	C,ELEC 10UF 16V
COC013	79TH0363	C,CERAMIC 0.1UF 50V

SYMBOL	PARTS NO	DESCRIPTION
COC014	79TH0549	C,CERAMIC 0.01UF 50V
COC015	79TH0363	C,CERAMIC 0.1UF 50V
COC016	79TH0364	C,ELEC 10UF 16V
COC017	79TH0363	C,CERAMIC 0.1UF 50V
COC018	79TH0363	C,CERAMIC 0.1UF 50V
COC019	79TH0549	C,CERAMIC 0.01UF 50V
COC020	79TH0549	C,CERAMIC 0.01UF 50V
COC021	79TH0363	C,CERAMIC 0.1UF 50V
COC022	79TH0363	C,CERAMIC 0.1UF 50V
COC023	79TH0364	C,ELEC 10UF 16V
COC024	79TH0549	C,CERAMIC 0.01UF 50V
COC025	79TH0364	C,ELEC 10UF 16V
COC026	79TH0549	C,CERAMIC 0.01UF 50V
COC027	79TH0549	C,CERAMIC 0.01UF 50V
COC028	79TH0364	C,ELEC 10UF 16V
COC031	79TH0365	C,ELEC 22UF 16V
COC032	79TH0549	C,CERAMIC 0.01UF 50V
COC033	79TH0549	C,CERAMIC 0.01UF 50V
COC034	79TH0549	C,CERAMIC 0.01UF 50V
COC035	79TH0549	C,CERAMIC 0.01UF 50V
COC036	79TH0365	C,ELEC 22UF 16V
COC038	79TH0356	C,CERAMIC 33PF 50V
COC039	79TH0364	C,ELEC 10UF 16V
COC040	79TH0549	C,CERAMIC 0.01UF 50V
COC041	79TH0365	C,ELEC 22UF 16V
COC042	79TH0549	C,CERAMIC 0.01UF 50V
COC043	79TH0365	C,ELEC 22UF 16V
COC044	79TH0363	C,CERAMIC 0.1UF 50V
COC045	79TH0365	C,ELEC 22UF 16V
COC046	79TH0363	C,CERAMIC 0.1UF 50V
COC047	79TH0365	C,ELEC 22UF 16V
COC048	79TH0364	C,ELEC 10UF 16V
COC052	79TH0364	C,ELEC 10UF 16V
COC053	79TH0353	C,CERAMIC 10PF 50V
COC054	79TH0246	C,FILM 4700PF 50V
COC055	79TH0267	C,FILM 150PF 50V
COC056	79TH0549	C,CERAMIC 0.01UF 50V
COC057	79TH0365	C,ELEC 22UF 16V
COC058	79TH0367	C,ELEC 1UF 50V
COC059	79TH0367	C,ELEC 1UF 50V

SYMBOL	PARTS NO	DESCRIPTION
COC060	79TH0365	C,ELEC 22UF 16V
COC061	79TH0549	C,CERAMIC 0.01UF 50V
COC062	79TH0549	C,CERAMIC 0.01UF 50V
COC063	79TH0549	C,CERAMIC 0.01UF 50V
COC065	79TH0340	C,ELEC 0.22UF 50V
COC066	79TH0266	C,FILM 1000PF 50V
COC067	79TH0266	C,FILM 1000PF 50V
COC068	79TH0356	C,CERAMIC 33PF 50V
COC069	79TH0357	C,CERAMIC 47PF 50V
COC070	79TH0549	C,CERAMIC 0.01UF 50V
COC071	79TH0297	C,ELEC 1UF 50V
COC072	79TH0549	C,CERAMIC 0.01UF 50V
COC073	79TH0549	C,CERAMIC 0.01UF 50V
COC074	79TH0268	C,FILM 1500PF 50V
COC075	79TH0352	C,CERAMIC 5PF 50V
COC076	79TH0266	C,FILM 1000PF 50V
COC077	79TH0549	C,CERAMIC 0.01UF 50V
COC078	79TH0364	C,ELEC 10UF 16V
COC079	79TH0549	C,CERAMIC 0.01UF 50V
COC080	79TH0362	C,CERAMIC 1500PF 50V
COC081	79TH0366	C,ELEC 4.7UF 25V
COC082	79TH0549	C,CERAMIC 0.01UF 50V
COC083	79TH0549	C,CERAMIC 0.01UF 50V
COC084	79TH0367	C,ELEC 1UF 50V
COC085	79TH0549	C,CERAMIC 0.01UF 50V
COC086	79TH0364	C,ELEC 10UF 16V
COC087	79TH0549	C,CERAMIC 0.01UF 50V
COC088	79TH0549	C,CERAMIC 0.01UF 50V
COC089	79TH0358	C,CERAMIC 56PF 50V
COC090	79TH0355	C,CERAMIC 27PF 50V
COC091	79TH0360	C,CERAMIC 120PF 50V
COC092	79TH0549	C,CERAMIC 0.01UF 50V
COC093	79TH0549	C,CERAMIC 0.01UF 50V
COC094	79TH0549	C,CERAMIC 0.01UF 50V
COC095	79TH0365	C,ELEC 22UF 16V
COC096	79TH0359	C,CERAMIC 100PF 50V
COC097	79TH0357	C,CERAMIC 47PF 50V
COC098	79TH0359	C,CERAMIC 100PF 50V
COC099	79TH0357	C,CERAMIC 47PF 50V
COC102	79TH0549	C,CERAMIC 0.01UF 50V

SYMBOL	PARTS NO	DESCRIPTION
COC103	79TH0365	C,ELEC 22UF 16V
COC104	79TH0268	C,FILM 1500PF 50V
COC105	79TH0297	C,ELEC 1UF 50V
COC106	79TH0549	C,CERAMIC 0.01UF 50V
COC107	79TH0365	C,ELEC 22UF 16V
COC108	79TH0271	C,FILM 2200PF 50V
COC109	79TH0269	C,FILM 180PF 50V
COC110	79TH0359	C,CERAMIC 100PF 50V
COC111	79TH0359	C,CERAMIC 100PF 50V
COC112	79TH0363	C,CERAMIC 0.1UF 50V
COC113	79TH0363	C,CERAMIC 0.1UF 50V
COC114	79TH0363	C,CERAMIC 0.1UF 50V
COC115	79TH0359	C,CERAMIC 100PF 50V
COC116	79TH0266	C,FILM 1000PF 50V
COC117	79TH0363	C,CERAMIC 0.1UF 50V
COC118	79TH0549	C,CERAMIC 0.01UF 50V
COC119	79TH0365	C,ELEC 22UF 16V
COC120	79TH0299	C,ELEC 5UF 12V
COC121	79TH0549	C,CERAMIC 0.01UF 50V
COC122	79TH0549	C,CERAMIC 0.01UF 50V
COC123	79TH0365	C,ELEC 22UF 16V
COC124	79TH0549	C,CERAMIC 0.01UF 50V
COC133	79TH0549	C,CERAMIC 0.01UF 50V
COC134	79TH0365	C,ELEC 22UF 16V
COC135	79TH0549	C,CERAMIC 0.01UF 50V
COC136	79TH0298	C,ELEC 22UF 50V
COC137	79TH0364	C,ELEC 10UF 16V
COC138	79TH0354	C,CERAMIC 15PF 50V
COC139	79TH0354	C,CERAMIC 15PF 50V
COC302	79TH0364	C,ELEC 10UF 16V
COC303	79TH0368	C,ELEC 2.2UF 50V
COC304	79TH0368	C,ELEC 2.2UF 50V
COC305	79TH0368	C,ELEC 2.2UF 50V
COC306	79TH0549	C,CERAMIC 0.01UF 50V
COC307	79TH0365	C,ELEC 22UF 16V
COC308	79TH0549	C,CERAMIC 0.01UF 50V
COC309	79TH0364	C,ELEC 10UF 16V
COC310	79TH0549	C,CERAMIC 0.01UF 50V
COC311	79TH0365	C,ELEC 22UF 16V
COC312	79TH0364	C,ELEC 10UF 16V

SYMBOL	PARTS NO	DESCRIPTION
COC313	79TH0368	C,ELEC 2.2UF 50V
COC314	79TH0368	C,ELEC 2.2UF 50V
COC315	79TH0368	C,ELEC 2.2UF 50V
COC316	79TH0549	C,CERAMIC 0.01UF 50V
COC317	79TH0365	C,ELEC 22UF 16V
COC318	79TH0549	C,CERAMIC 0.01UF 50V
COC319	79TH0364	C,ELEC 10UF 16V
COC320	79TH0549	C,CERAMIC 0.01UF 50V
COC321	79TH0365	C,ELEC 22UF 16V
COC322	79TH0364	C,ELEC 10UF 16V
COC323	79TH0368	C,ELEC 2.2UF 50V
COC324	79TH0368	C,ELEC 2.2UF 50V
COC325	79TH0368	C,ELEC 2.2UF 50V
COC326	79TH0549	C,CERAMIC 0.01UF 50V
COC327	79TH0365	C,ELEC 22UF 16V
COC328	79TH0549	C,CERAMIC 0.01UF 50V
COC329	79TH0364	C,ELEC 10UF 16V
COC330	79TH0549	C,CERAMIC 0.01UF 50V
COC331	79TH0365	C,ELEC 22UF 16V
COC332	79TH0363	C,CERAMIC 0.1UF 50V
COC333	79TH0368	C,ELEC 2.2UF 50V
COC334	79TH0273	C,FILM 470PF 50V
COC335	79TH0549	C,CERAMIC 0.01UF 50V
COC336	79TH0364	C,ELEC 10UF 16V
COC337	79TH0363	C,CERAMIC 0.1UF 50V
COC338	79TH0354	C,CERAMIC 15PF 50V
COC339	79TH0363	C,CERAMIC 0.1UF 50V
COC340	79TH0363	C,CERAMIC 0.1UF 50V
COC341	79TH0364	C,ELEC 10UF 16V
COC342	79TH0363	C,CERAMIC 0.1UF 50V
COC343	79TH0363	C,CERAMIC 0.1UF 50V
COC344	79TH0366	C,ELEC 4.7UF 25V
COC345	79TH0270	C,FILM 220PF 50V
COC346	79TH0365	C,ELEC 22UF 16V
COC347	79TH0364	C,ELEC 10UF 16V
COC348	79TH0549	C,CERAMIC 0.01UF 50V
COC349	79TH0364	C,ELEC 10UF 16V
COC350	79TH0549	C,CERAMIC 0.01UF 50V
COC351	79TH0364	C,ELEC 10UF 16V
COC352	79TH0549	C,CERAMIC 0.01UF 50V

SYMBOL	PARTS NO	DESCRIPTION
COC353	79TH0364	C,ELEC 10UF 16V
COC354	79TH0549	C,CERAMIC 0.01UF 50V
COC355	79TH0549	C,CERAMIC 0.01UF 50V
COC356	79TH0549	C,CERAMIC 0.01UF 50V
COC357	79TH0364	C,ELEC 10UF 16V
COC358	79TH0364	C,ELEC 10UF 16V
COC359	79TH0549	C,CERAMIC 0.01UF 50V
COC360	79TH0549	C,CERAMIC 0.01UF 50V
COC351	79TH0549	C,CERAMIC 0.01UF 50V
COC362	79TH0364	C,ELEC 10UF 16V
COC363	79TH0355	C,CERAMIC 27PF 50V
COC364	79TH0355	C,CERAMIC 27PF 50V
COC393	79TH0364	C,ELEC 10UF 16V
COC394	79TH0549	C,CERAMIC 0.01UF 50V
COC395	79TH0364	C,ELEC 10UF 16V
COC396	79TH0549	C,CERAMIC 0.01UF 50V
COC397	79TH0364	C,ELEC 10UF 16V
COC398	79TH0363	C,CERAMIC 0.1UF 50V
COC399	79TH0367	C,ELEC 1UF 50V
COC400	79TH0367	C,ELEC 1UF 50V
COC401	79TH0365	C,ELEC 22UF 16V
COC402	79TH0363	C,CERAMIC 0.1UF 50V
COC403	79TH0364	C,ELEC 10UF 16V
COC404	79TH0363	C,CERAMIC 0.1UF 50V
COC405	79TH0363	C,CERAMIC 0.1UF 50V
COC406	79TH0365	C,ELEC 22UF 16V
COC409	79TH0365	C,ELEC 22UF 16V
COC410	79TH0549	C,CERAMIC 0.01UF 50V
COC411	79TH0364	C,ELEC 10UF 16V
COC412	79TH0266	C,FILM 1000PF 50V
COC413	79TH0363	C,CERAMIC 0.1UF 50V
COC414	79TH0549	C,CERAMIC 0.01UF 50V
COC415	79TH0549	C,CERAMIC 0.01UF 50V
COC416	79TH0549	C,CERAMIC 0.01UF 50V
COC417	79TH0363	C,CERAMIC 0.1UF 50V
COC418	79TH0368	C,ELEC 2.2UF 50V
COC419	79TH0365	C,ELEC 22UF 16V
COC420	79TH0549	C,CERAMIC 0.01UF 50V
COC424	79TH0365	C,ELEC 22UF 16V
COC425	79TH0352	C,CERAMIC 5PF 50V

SYMBOL	PARTS NO	DESCRIPTION
COC426	79TH0357	C,CERAMIC 47PF 50V
COC427	79TH0361	C,CERAMIC 150PF 50V
COC428	79TH0365	C,ELEC 22UF 16V
COC429	79TH0549	C,CERAMIC 0.01UF 50V
COC430	79TH0365	C,ELEC 22UF 16V
COC431	79TH0352	C,CERAMIC 5PF 50V
COC432	79TH0357	C,CERAMIC 47PF 50V
COC433	79TH0361	C,CERAMIC 150PF 50V
COC434	79TH0365	C,ELEC 22UF 16V
COC435	79TH0549	C,CERAMIC 0.01UF 50V
COC438	79TH0364	C,ELEC 10UF 16V
COC439	79TH0365	C,ELEC 22UF 16V
COC440	79TH0549	C,CERAMIC 0.01UF 50V
COC441	79TH0364	C,ELEC 10UF 16V
COC444	79TH0365	C,ELEC 22UF 16V
COC445	79TH0365	C,ELEC 22UF 16V
COC446	79TH0365	C,ELEC 22UF 16V
COC447	79TH0549	C,CERAMIC 0.01UF 50V
COC450	79TH0364	C,ELEC 10UF 16V
COC451	79TH0365	C,ELEC 22UF 16V
COC452	79TH0365	C,ELEC 22UF 16V
COC453	79TH0549	C,CERAMIC 0.01UF 50V
COC454	79TH0359	C,CERAMIC 100PF 50V
COC455	79TH0363	C,CERAMIC 0.1UF 50V
COC456	79TH0365	C,ELEC 22UF 16V
COC457	79TH0549	C,CERAMIC 0.01UF 50V
COC460	79TH0365	C,ELEC 22UF 16V
COC461	79TH0549	C,CERAMIC 0.01UF 50V
COC462	79TH0364	C,ELEC 10UF 16V
COC463	79TH0549	C,CERAMIC 0.01UF 50V
COC464	79TH0365	C,ELEC 22UF 16V
COC465	79TH0549	C,CERAMIC 0.01UF 50V
COC466	79TH0364	C,ELEC 10UF 16V
COC467	79TH0549	C,CERAMIC 0.01UF 50V
COC468	79TH0365	C,ELEC 22UF 16V
COC470	79TH0363	C,CERAMIC 0.1UF 50V
COC471	79TH0359	C,CERAMIC 100PF 50V
COC472	79TH0359	C,CERAMIC 100PF 50V
COC473	79TH0356	C,CERAMIC 33PF 50V
COC474	79TH0356	C,CERAMIC 33PF 50V

SYMBOL	PARTS NO	DESCRIPTION
COC475	79TH0356	C,CERAMIC 33PF 50V
COC476	79TH0359	C,CERAMIC 100PF 50V
COC479	79TH0549	C,CERAMIC 0.01UF 50V
COC480	79TH0364	C,ELEC 10UF 16V
COC481	79TH0357	C,CERAMIC 47PF 50V
COC482	79TH0244	C,FILM 3300PF 50V
COD001	79TH0631	C,CERAMIC 220K 500V
COD002	79TH0629	C,FILM 0.01UF 25V
⚠ COD003	79TH0283	C,FILM 1UF 250V
⚠ COD004	79TH0283	C,FILM 1UF 250V
⚠ COD005	79TH0283	C,FILM 1UF 250V
COD006	79TH0288	C,CERAMIC 0.01UF 50V
COD007	79TH0288	C,CERAMIC 0.01UF 50V
COD008	79TH0288	C,CERAMIC 0.01UF 50V
COD009	79TH0648	C,ELEC 4.7UF 250V
COD010	79TH0648	C,ELEC 4.7UF 250V
COD011	79TH0648	C,ELEC 4.7UF 250V
COD012	79TH0648	C,ELEC 4.7UF 250V
COD013	79TH0648	C,ELEC 4.7UF 250V
COD014	79TH0648	C,ELEC 4.7UF 250V
COE001	79TH0307	C,ELEC 47UF 25V
COE002	79TH0278	C,FILM 0.1UF 50V
COE003	79TH0307	C,ELEC 47UF 25V
COE004	79TH0278	C,FILM 0.1UF 50V
COE005	79TH0314	C,ELEC 4.7UF 50V
COE006	79TH0278	C,FILM 0.1UF 50V
COE007	79TH0278	C,FILM 0.1UF 50V
COE008	79TH0305	C,ELEC 22UF 25V
COE009	79TH0278	C,FILM 0.1UF 50V
COE010	79TH0307	C,ELEC 47UF 25V
COE011	79TH0250	C,FILM 2200P 1.25KV
COE012	79TH0248	C,FILM 3300P 630V
COE013	79TH0253	C,FILM 3900PF 800V
COE014	79TH0251	C,FILM 5600P 1.25KV
COE015	79TH0284	C,FILM 10UF 250V
COE016	79TH0252	C,FILM 1000PF 2KV
COE017	79TH0235	C,FILM 1000PF 10V
COE018	79TH0252	C,FILM 1000PF 2KV
COE019	79TH0277	C,FILM 4700PF 250V
COE020	79TH0281	C,FILM 0.47UF 50V

SYMBOL	PARTS NO	DESCRIPTION
COE021	79TH0309	C,ELEC 4.7UF 35V
COE022	79TH0278	C,FILM 0.1UF 50V
COE023	79TH0278	C,FILM 0.1UF 50V
COE024	79TH0300	C,ELEC 15UF 35V
COE025	79TH0278	C,FILM 0.1UF 50V
COE026	79TH0307	C,ELEC 47UF 25V
COE029	79TH0276	C,FILM 0.1UF 250V
COE030	79TH0304	C,ELEC 100UF 25V
COE031	79TH0278	C,FILM 0.1UF 50V
COE032	79TH0307	C,ELEC 47UF 25V
COE033	79TH0278	C,FILM 0.1UF 50V
COE034	79TH0333	C,ELEC 33UF 250V
COE035	79TH0276	C,FILM 0.1UF 250V
COE036	79TH0286	C,FILM 0.47UF 250V
COE037	79TH0343	C,ELEC 56UF 250V
COE038	79TH0338	C,ELEC 10UF 700V
COE039	79TH0276	C,FILM 0.1UF 250V
COE040	79TH0237	C,FILM 1000PF 50V
COE043	79TH0278	C,FILM 0.1UF 50V
COE044	79TH0278	C,FILM 0.1UF 50V
COE045	79TH0307	C,ELEC 47UF 25V
COE046	79TH0295	C,CERAMIC 56PF 50V
COE047	79TH0279	C,FILM 0.022UF 50V
COE049	79TH0242	C,FILM 1UF 50V
COE050	79TH0280	C,FILM 4700PF 50V
COE051	79TH0347	C,ELEC 10UF 50V
COE053	79TH0278	C,FILM 0.1UF 50V
COE055	79TH0290	C,CERAMIC 4700PF 50V
COE058	79TH0278	C,FILM 0.1UF 50V
COE059	79TH0248	C,FILM 3300P 630V
COE060	79TH0303	C,ELEC 10UF 25V
COF001	79TH0278	C,FILM 0.1UF 50V
COF002	79TH0307	C,ELEC 47UF 25V
COF003	79TH0293	C,CERAMIC 0.01UF 50V
COF004	79TH0293	C,CERAMIC 0.01UF 50V
COF005	79TH0293	C,CERAMIC 0.01UF 50V
COF006	79TH0293	C,CERAMIC 0.01UF 50V
COF007	79TH0293	C,CERAMIC 0.01UF 50V
COF008	79TH0293	C,CERAMIC 0.01UF 50V
COF009	79TH0293	C,CERAMIC 0.01UF 50V

SYMBOL	PARTS NO	DESCRIPTION
COF010	79TH0278	C,FILM 0.1UF 50V
COF011	79TH0307	C,ELEC 47UF 25V
COF012	79TH0307	C,ELEC 47UF 25V
COF013	79TH0305	C,ELEC 22UF 25V
COF014	79TH0278	C,FILM 0.1UF 50V
COF015	79TH0307	C,ELEC 47UF 25V
COF016	79TH0293	C,CERAMIC 0.01UF 50V
COF017	79TH0278	C,FILM 0.1UF 50V
COF018	79TH0278	C,FILM 0.1UF 50V
COF019	79TH0303	C,ELEC 10UF 25V
COF020	79TH0239	C,FILM 2200PF 50V
COF021	79TH0303	C,ELEC 10UF 25V
COF023	79TH0316	C,ELEC 10UF 160V
COF024	79TH0292	C,CERAMIC 470PF 50V
COF025	79TH0332	C,ELEC 10UF 250V
COF026	79TH0337	C,ELEC 0.47UF 350V
COF027	79TH0317	C,ELEC 4.7UF 160V
COF028	79TH0293	C,CERAMIC 0.01UF 50V
COF029	79TH0278	C,FILM 0.1UF 50V
COF030	79TH0313	C,ELEC 220UF 50V
COF031	79TH0278	C,FILM 0.1UF 50V
COF032	79TH0315	C,ELEC 470UF 50V
COF033	79TH0278	C,FILM 0.1UF 50V
COF034	79TH0304	C,ELEC 100UF 25V
COF035	79TH0276	C,FILM 0.1UF 250V
⚠ COF036	79TH0334	C,ELEC 47UF 250V
COF037	79TH0293	C,CERAMIC 0.01UF 50V
COF038	79TH0293	C,CERAMIC 0.01UF 50V
COF039	79TH0293	C,CERAMIC 0.01UF 50V
COF040	79TH0293	C,CERAMIC 0.01UF 50V
COF041	79TH0293	C,CERAMIC 0.01UF 50V
COF042	79TH0293	C,CERAMIC 0.01UF 50V
COF043	79TH0293	C,CERAMIC 0.01UF 50V
COF044	79TH0293	C,CERAMIC 0.01UF 50V
COF045	79TH0308	C,ELEC 470UF
COF046	79TH0304	C,ELEC 100UF 25V
COF047	79TH0305	C,ELEC 22UF 25V
COF048	79TH0303	C,ELEC 10UF 25V
COF049	79TH0303	C,ELEC 10UF 25V
COF050	79TH0307	C,ELEC 47UF 25V

SYMBOL	PARTS NO	DESCRIPTION
COF051	79TH0345	C,ELEC 22UF 25V
COF052	79TH0303	C,ELEC 10UF 25V
COF053	79TH0304	C,ELEC 100UF 25V
COF054	79TH0278	C,FILM 0.1UF 50V
COF055	79TH0307	C,ELEC 47UF 25V
COF056	79TH0278	C,FILM 0.1UF 50V
COF057	79TH0307	C,ELEC 47UF 25V
COF058	79TH0304	C,ELEC 100UF 25V
COF059	79TH0346	C,ELEC 47UF 25V
COF060	79TH0296	C,CERAMIC 180PF 500V
COF061	79TH0316	C,ELEC 10UF 160V
COF062	79TH0286	C,FILM 0.47UF 250V
COF063	79TH0305	C,ELEC 22UF 25V
COF065	79TH0283	C,FILM 1UF 250V
COF066	79TH0329	C,ELEC 470UF 35V
COF067	79TH0328	C,ELEC 1000UF 35V
COF068	79TH0328	C,ELEC 1000UF 35V
COF069	79TH0276	C,FILM 0.1UF 250V
COF070	79TH0279	C,FILM 0.022UF 50V
COF071	79TH0314	C,ELEC 4.7UF 50V
COF072	79TH0237	C,FILM 1000PF 50V
COF073	79TH0237	C,FILM 1000PF 50V
COF075	79TH0305	C,ELEC 22UF 25V
COF076	79TH0305	C,ELEC 22UF 25V
COF077	79TH0306	C,ELEC 33UF 25V
COF078	79TH0302	C,ELEC 47UF 16V
COF079	79TH0278	C,FILM 0.1UF 50V
COF080	79TH0307	C,ELEC 47UF 25V
COF081	79TH0312	C,ELEC 2.2UF 50V
COF082	79TH0249	C,FILM 1000P 50V
COF083	79TH0238	C,FILM 1500PF 50V
COF084	79TH0291	C,CERAMIC 2200PF 50V
COF085	79TH0239	C,FILM 2200PF 50V
COF086	79TH0238	C,FILM 1500PF 50V
COF087	79TH0278	C,FILM 0.1UF 50V
COF088	79TH0278	C,FILM 0.1UF 50V
COF089	79TH0313	C,ELEC 220UF 50V
COF090	79TH0307	C,ELEC 47UF 25V
COF091	79TH0238	C,FILM 1500PF 50V
COF092	79TH0238	C,FILM 1500PF 50V

SYMBOL	PARTS NO	DESCRIPTION
COF094	79TH0279	C,FILM 0.022UF 50V
COF095	79TH0311	C,ELEC 10UF 50V
COF096	79TH0347	C,ELEC 10UF 50V
COF097	79TH0311	C,ELEC 10UF 50V
COF098	79TH0311	C,ELEC 10UF 50V
COF099	79TH0311	C,ELEC 10UF 50V
COF100	79TH0304	C,ELEC 100UF 25V
COF101	79TH0240	C,FILM 330PF 50V
COF103	79TH0299	C,ELEC 5UF 12V
COF104	79TH0237	C,FILM 1000PF 50V
COF105	79TH0299	C,ELEC 5UF 12V
COF107	79TH0310	C,ELEC 1UF 50V
COF109	79TH0305	C,ELEC 22UF 25V
COF111	79TH0278	C,FILM 0.1UF 50V
COF112	79TH0278	C,FILM 0.1UF 50V
COF113	79TH0278	C,FILM 0.1UF 50V
COF114	79TH0239	C,FILM 2200PF 50V
COF115	79TH0311	C,ELEC 10UF 50V
COF116	79TH0348	C,ELEC 4.7UF 50V
COF117	79TH0347	C,ELEC 10UF 50V
COF118	79TH0278	C,FILM 0.1UF 50V
COF119	79TH0301	C,ELEC 22UF 16V
COF120	79TH0293	C,CERAMIC 0.01UF 50V
COF121	79TH0239	C,FILM 2200PF 50V
COF122	79TH0237	C,FILM 1000PF 50V
COF123	79TH0294	C,CERAMIC 100PF 50V
COF124	79TH0293	C,CERAMIC 0.01UF 50V
COF125	79TH0278	C,FILM 0.1UF 50V
COF126	79TH0278	C,FILM 0.1UF 50V
COF127	79TH0236	C,FILM 100PF 50V
COF128	79TH0311	C,ELEC 10UF 50V
COF129	79TH0311	C,ELEC 10UF 50V
COF130	79TH0293	C,CERAMIC 0.01UF 50V
COF131	79TH0302	C,ELEC 47UF 16V
COF132	79TH0245	C,FILM 3900PF 50V
COF133	79TH0270	C,FILM 220PF 50V
COF134	79TH0270	C,FILM 220PF 50V
COF135	79TH0310	C,ELEC 1UF 50V
COF136	79TH0237	C,FILM 1000PF 50V
COF137	79TH0278	C,FILM 0.1UF 50V

SYMBOL	PARTS NO	DESCRIPTION
COG001	79TH0325	C,ELEC 47UF 25V
COG002	79TH0241	C,FILM 0.1UF 50V
COG005	79TH0265	C,FILM 220PF 50V
COG006	79TH0241	C,FILM 0.1UF 50V
COG007	79TH0242	C,FILM 1UF 50V
COG008	79TH0321	C,ELEC 10UF 25V
COG009	79TH0241	C,FILM 0.1UF 50V
COG012	79TH0241	C,FILM 0.1UF 50V
COG013	79TH0241	C,FILM 0.1UF 50V
COG014	79TH0323	C,ELEC 22UF 25V
COG015	79TH0325	C,ELEC 47UF 25V
COG016	79TH0241	C,FILM 0.1UF 50V
COG017	79TH0241	C,FILM 0.1UF 50V
COG018	79TH0325	C,ELEC 47UF 25V
COG019	79TH0324	C,ELEC 220UF 25V
COG020	79TH0323	C,ELEC 22UF 25V
COG021	79TH0323	C,ELEC 22UF 25V
COG022	79TH0325	C,ELEC 47UF 25V
COG023	79TH0241	C,FILM 0.1UF 50V
COG024	79TH0341	C,ELEC 0.47UF 50V
COG025	79TH0321	C,ELEC 10UF 25V
COG026	79TH0241	C,FILM 0.1UF 50V
COG028	79TH0344	C,ELEC 10UF 50V
COG029	79TH0327	C,ELEC 10UF 35V
COG030	79TH0241	C,FILM 0.1UF 50V
COG031	79TH0319	C,ELEC 1000UF 16V
COG032	79TH0241	C,FILM 0.1UF 50V
COG033	79TH0330	C,ELEC 0.33UF 50V
COG034	79TH0331	C,ELEC 0.47UF 50V
COG035	79TH0331	C,ELEC 0.47UF 50V
COG036	79TH0331	C,ELEC 0.47UF 50V
COG037	79TH0320	C,ELEC 470UF 16V
COG038	79TH0320	C,ELEC 470UF 16V
COG039	79TH0318	C,ELEC 100UF 16V
COG040	79TH0241	C,FILM 0.1UF 50V
COG041	79TH0349	C,ELEC 4700UF 35V
COG042	79TH0241	C,FILM 0.1UF 50V
COG043	79TH0331	C,ELEC 0.47UF 50V
COG044	79TH0331	C,ELEC 0.47UF 50V
COG045	79TH0326	C,ELEC 470UF 25V

SYMBOL	PARTS NO	DESCRIPTION
COG046	79TH0326	C,ELEC 470UF 25V
COG050	79TH0241	C,FILM 0.1UF 50V
COG051	79TH0241	C,FILM 0.1UF 50V
COG052	79TH0272	C,FILM 330PF 50V
COG053	79TH0272	C,FILM 330PF 50V
COH001	79TH0241	C,FILM 0.1UF 50V
COH002	79TH0325	C,ELEC 47UF 25V
COH003	79TH0288	C,CERAMIC 0.01UF 50V
COH004	79TH0282	C,FILM 0.1UF 250V
COH005	79TH0285	C,FILM 2.2UF 250V
COH006	79TH0241	C,FILM 0.1UF 50V
COH007	79TH0241	C,FILM 0.1UF 50V
COH008	79TH0254	C,FILM 2700PF 2KV
COH009	79TH0275	C,FILM 0.18UF 50V
COH010	79TH0254	C,FILM 2700PF 2KV
COH011	79TH0254	C,FILM 2700PF 2KV
COH012	79TH0282	C,FILM 0.1UF 250V
COH013	79TH0322	C,ELEC 100UF 25V
COH014	79TH0322	C,ELEC 100UF 25V
COH015	79TH0340	C,ELEC 0.22UF 50V
COH017	79TH0241	C,FILM 0.1UF 50V
COH018	79TH0241	C,FILM 0.1UF 50V
COH019	79TH0241	C,FILM 0.1UF 50V
COH020	79TH0322	C,ELEC 100UF 25V
COH021	79TH0282	C,FILM 0.1UF 250V
COH022	79TH0241	C,FILM 0.1UF 50V
COH023	79TH0272	C,FILM 330PF 50V
COH024	79TH0272	C,FILM 330PF 50V
COH026	79TH0243	C,FILM 0.22UF 50V
COH027	79TH0241	C,FILM 0.1UF 50V
COH028	79TH0241	C,FILM 0.1UF 50V
COH029	79TH0325	C,ELEC 47UF 25V
COH031	79TH0335	C,ELEC 10UF 700V
COH032	79TH0282	C,FILM 0.1UF 250V
COH033	79TH0274	C,FILM 560PF 50V
COH034	79TH0289	C,CERAMIC 100PF 50V
COH035	79TH0287	C,CERAMIC 56P 50V
COH036	79TH0325	C,ELEC 47UF 25V
COH037	79TH0241	C,FILM 0.1UF 50V
COH038	79TH0342	C,ELEC 22UF 250V

SYMBOL	PARTS NO	DESCRIPTION
COH039	79TH0336	C,ELEC 1UF 700V
COH040	79TH0241	C,FILM 0.1UF 50V
COH041	79TH0260	C,FILM 0.47UF 400V
COH042	79TH0261	C,FILM 0.56UF 400V
COH043	79TH0241	C,FILM 0.1UF 50V
COH044	79TH0262	C,FILM 0.68UF 400V
COH045	79TH0260	C,FILM 0.47UF 400V
COH046	79TH0241	C,FILM 0.1UF 50V
COH047	79TH0264	C,FILM 0.82UF 400V
COH048	79TH0263	C,FILM 0.75UF 400V
COH049	79TH0241	C,FILM 0.1UF 50V
COH050	79TH0259	C,FILM 0.39UF 400V
COH051	79TH0259	C,FILM 0.39UF 400V
COH052	79TH0241	C,FILM 0.1UF 50V
COH053	79TH0258	C,FILM 0.22UF 400V
COH054	79TH0257	C,FILM 0.15UF 400V
COH055	79TH0241	C,FILM 0.1UF 50V
COH056	79TH0255	C,FILM 0.1UF 400V
COH057	79TH0256	C,FILM 0.12UF 400V
COH058	79TH0256	C,FILM 0.12UF 400V
COH059	79TH0256	C,FILM 0.12UF 400V
COH060	79TH0241	C,FILM 0.1UF 50V
COH061	79TH0322	C,ELEC 100UF 25V
COH062	79TH0282	C,FILM 0.1UF 250V
COH063	79TH0339	C,ELEC 330UF 250V
COH064	79TH0241	C,FILM 0.1UF 50V
COH065	79TH0241	C,FILM 0.1UF 50V
COH066	79TH0241	C,FILM 0.1UF 50V
COH067	79TH0241	C,FILM 0.1UF 50V
COH068	79TH0241	C,FILM 0.1UF 50V
COH069	79TH0241	C,FILM 0.1UF 50V
COH070	79TH0254	C,FILM 2700PF 2KV
COH071	79TH0254	C,FILM 2700PF 2KV
COH072	79TH0256	C,FILM 0.12UF 400V
COH073	79TH0255	C,FILM 0.1UF 400V
COH074	79TH0286	C,FILM 0.47UF 250V
⚠COJ001	79TH0640	C,CERAMIC 0.022UF 70V
⚠COJ002	79TH0640	C,CERAMIC 0.022UF 70V
⚠COJ003	79TH0622	C,FILM 0.47UF 100V
⚠COJ004	79TH0622	C,FILM 0.47UF 100V

SYMBOL	PARTS NO	DESCRIPTION
⚠COJ005	79TH0640	C,CERAMIC 0.022UF 70V
⚠COJ006	79TH0640	C,CERAMIC 0.022UF 70V
COJ007	79TH0639	C,CERAMIC 0.001UF 70V
COJ008	79TH0639	C,CERAMIC 0.001UF 70V
COJ009	79TH0642	C,CERAMIC 0.01UF 70V
⚠COJ010	79TH0658	C,ELEC 100UF 250V
⚠COJ011	79TH0658	C,ELEC 100UF 250V
COJ012	79TH0310	C,ELEC 1UF 50V
COJ013	79TH0281	C,FILM 0.47UF 50V
COJ014	79TH0625	C,FILM 0.1UF 25V
COJ015	79TH0237	C,FILM 1000PF 50V
COJ016	79TH0279	C,FILM 0.022UF 50V
COJ017	79TH0641	C,CERAMIC 0.0018UF 7000V
COJ018	79TH0641	C,CERAMIC 0.0018UF 7000V
COJ019	79TH0626	C,FILM 0.1UF 25V
COJ020	79TH0627	C,FILM 0.68UF 25V
COJ021	79TH0304	C,ELEC 100UF 25V
COJ022	79TH0278	C,FILM 0.1UF 50V
COJ023	79TH0625	C,FILM 0.1UF 25V
COJ024	79TH0279	C,FILM 0.022UF 50V
COJ025	79TH0237	C,FILM 1000PF 50V
COJ026	79TH0641	C,CERAMIC 0.0018UF 7000V
COJ027	79TH0641	C,CERAMIC 0.0018UF 7000V
COJ028	79TH0626	C,FILM 0.1UF 25V
COJ029	79TH0628	C,FILM 0.82UF 25V
⚠COJ030	79TH0640	C,CERAMIC 0.022UF 70V
⚠COJ031	79TH0640	C,CERAMIC 0.022UF 70V
COJ033	79TH0667	C,ELEC 1000UF 35V
COJ034	79TH0666	C,ELEC 680UF 35V
COJ035	79TH0278	C,FILM 0.1UF 50V
COJ036	79TH0661	C,ELEC 3900UF 25V
COJ037	79TH0660	C,ELEC 220UF 25V
COJ038	79TH0278	C,FILM 0.1UF 50V
COJ039	79TH0660	C,ELEC 220UF 25V
COJ040	79TH0278	C,FILM 0.1UF 50V
COJ041	79TH0278	C,FILM 0.1UF 50V
COJ042	79TH0660	C,ELEC 220UF 25V
COJ043	79TH0278	C,FILM 0.1UF 50V
COJ044	79TH0278	C,FILM 0.1UF 50V
COJ045	79TH0660	C,ELEC 220UF 25V

SYMBOL	PARTS NO	DESCRIPTION
COJ046	79TH0278	C,FILM 0.1UF 50V
COJ047	79TH0665	C,ELEC 2700UF 16V
COJ048	79TH0665	C,ELEC 2700UF 16V
COJ049	79TH0664	C,ELEC 270UF 16V
COJ050	79TH0310	C,ELEC 1UF 50V
COJ051	79TH0624	C,FILM 0.15UF 50V
COJ052	79TH0310	C,ELEC 1UF 50V
COJ053	79TH0824	C,ELEC 100UF 50V
COJ054	79TH0660	C,ELEC 220UF 25V
COJ055	79TH0278	C,FILM 0.1UF 50V
COJ057	79TH0278	C,FILM 0.1UF 50V
COJ058	79TH0660	C,ELEC 220UF 25V
COJ059	79TH0278	C,FILM 0.1UF 50V
COJ060	79TH0278	C,FILM 0.1UF 50V
COJ061	79TH0660	C,ELEC 220UF 25V
COJ062	79TH0278	C,FILM 0.1UF 50V
COJ063	79TH0278	C,FILM 0.1UF 50V
COJ064	79TH0641	C,CERAMIC 0.0018UF 7000V
COJ065	79TH0663	C,ELEC 470UF 50V
COJ066	79TH0668	C,ELEC 390UF 50V
COJ067	79TH0278	C,FILM 0.1UF 50V
COJ068	79TH0278	C,FILM 0.1UF 50V
COJ069	79TH0651	C,ELEC 470UF 50V
COJ070	79TH0278	C,FILM 0.1UF 50V
COJ071	79TH0641	C,CERAMIC 0.0018UF 7000V
COJ072	79TH0662	C,ELEC 220UF 50V
COJ073	79TH0670	C,ELEC 1200UF 160V
COJ074	79TH0670	C,ELEC 1200UF 160V
COJ075	79TH0649	C,ELEC 100UF 16V
COJ076	79TH0278	C,FILM 0.1UF 50V
COJ077	79TH0281	C,FILM 0.47UF 50V
COJ078	79TH0282	C,FILM 0.1UF 250V
COJ079	79TH0282	C,FILM 0.1UF 250V
COJ080	79TH0652	C,ELEC 100UF 250V
COJ081	79TH0282	C,FILM 0.1UF 250V
COJ082	79TH0652	C,ELEC 100UF 250V
COJ083	79TH0282	C,FILM 0.1UF 250V
COJ084	79TH0641	C,CERAMIC 0.0018UF 7000V
COJ086	79TH0649	C,ELEC 100UF 16V
COJ087	79TH0659	C,ELEC 820UF 16V

SYMBOL	PARTS NO	DESCRIPTION
COJ088	79TH0663	C,ELEC 470UF 50V
COJ089	79TH0668	C,ELEC 390UF 50V
COJ090	79TH0278	C,FILM 0.1UF 50V
COJ091	79TH0621	C,FILM 0.1UF 100V
⚠COJ101	79TH0658	C,ELEC 100UF 250V
⚠COJ102	79TH0658	C,ELEC 100UF 250V
COL001	79TH0312	C,ELEC 2.2UF 50V
COL002	79TH0650	C,ELEC 22UF 50V
COL003	79TH0630	C,FILM 0.01UF 50V
COL004	79TH0305	C,ELEC 22UF 25V
COL005	79TH0636	C,CERAMIC 0.1UF 50V
COL007	79TH0310	C,ELEC 1UF 50V
COL008	79TH0636	C,CERAMIC 0.1UF 50V
COL009	79TH0637	C,CERAMIC 0.47UF 50V
COL011	79TH0650	C,ELEC 22UF 50V
COL012	79TH0650	C,ELEC 22UF 50V
COL014	79TH0649	C,ELEC 100UF 16V
COL016	79TH0636	C,CERAMIC 0.1UF 50V
COL017	79TH0636	C,CERAMIC 0.1UF 50V
COM001	79TH0329	C,ELEC 470UF 35V
COM002	79TH0329	C,ELEC 470UF 35V
COM003	79TH0329	C,ELEC 470UF 35V
CON001	79TH0247	C,FILM 0.68UF 50V
CON002	79TH0320	C,ELEC 470UF 16V
CON003	79TH0241	C,FILM 0.1UF 50V
COP001	79TH0241	C,FILM 0.1UF 50V
COP002	79TH0241	C,FILM 0.1UF 50V
VCC001	79TH0350	C,TRIMMER(R) 20P
VCC002	79TH0351	C,TRIMMER(G) 30P
VCC003	79TH0351	C,TRIMMER(G) 30P

DIFFERENTIAL PART LIST BETWEEN XM3750 and XM3750G

XM3750			XM3750G		
SYNBOL	PART NO	PART NAME	SYNBOL	PART NO	PART NAME
	79TH0023	USER'S MANUAL XP3778			
				79TH0025	USER'S MANUAL
	79TH0034	SW REG PWB ASSY PG031B			
	79TH0036	FAN SENSE PWB ASSY PG090A			
				79TH0547	BARCODE LABEL
	79TH0831	CARTON BOX (TOP) 8887000240			
				79TH0834	WARNING LABEL (2)
				79TH0835	SERIAL NO. LABEL
				79TH0837	CARTON BOX (BOTTOM)
				79TH0838	CATON BOX (TOP)
				79TH0840	SW REG PWB ASSY PG031B
COM001	79TH0329	C, ELEC 470UF 35V			
COM002	79TH0329	C, ELEC 470UF 35V			
COM003	79TH0329	C, ELEC 470UF 35V			
DOM001	79TH0403	DIODE DAN401			
MD005	79TH0516	CARTON BOX (BOTTOM)			
RNM001	79TH0446	R, NETWORK EXB-F4E 472J			
ROM002	79TH0143	R, FUSE 33H 1/2W			
ROM003	79TH0143	R, FUSE 33H 1/2W			
ROM004	79TH0143	R, FUSE 33H 1/2W			

DIFFERENTIAL PART LIST BETWEEN XM3750 and XP3778

XM3750			XP3778		
SYNBOL	PART NO	PART NAME	SYNBOL	PART NO	PART NAME
				79TH0042	CPU PWB ASSY PG026B
	79TH0829	CPU PWB ASSY (XM) PG026XM			
	79TH0831	CARTON BOX (TOP) 8887000240			
				79TH0832	CARTON BOX (BOTTOM)
				79TH0833	CARTON BOX (TOP)
			COB001	79TH0356	C, CERAMIC 33PF 50V
			COB002	79TH0356	C, CERAMIC 33PF 50V
			COB003	79TH0364	C, ELEC 100F 16V
			COB004	79TH0673	C, TANTAL 0.47UF 16V
			COB005	79TH0672	C, CERAMIC 2700PF 50V
			COB006	79TH0673	C, TANTAL 0.47UF 16V
			COB007	79TH0363	C, CERAMIC 0.1UF 50V
			COB008	79TH0675	C, ELEC 10UF 25V
			COB009	79TH0675	C, ELEC 10UF 25V
			COB010	79TH0675	C, ELEC 10UF 25V
			COB011	79TH0675	C, ELEC 10UF 25V
			COB012	79TH0674	C, ELEC 47UF 16V
			COB013	79TH0363	C, CERAMIC 0.1UF 50V
			COB014	79TH0676	C, ELEC 22UF 25V
			COB015	79TH0363	C, CERAMIC 0.1UF 50V
			COB016	79TH0674	C, ELEC 47UF 16V
			COB017	79TH0674	C, ELEC 47UF 16V
			COB018	79TH0365	C, ELEC 22UF 16V
			COB019	79TH0364	C, ELEC 10UF 16V
			COB020	79TH0365	C, ELEC 22UF 16V
			COB021	79TH0363	C, CERAMIC 0.1UF 50V
			COB022	79TH0363	C, CERAMIC 0.1UF 50V
			COB023	79TH0363	C, CERAMIC 0.1UF 50V
			COB024	79TH0363	C, CERAMIC 0.1UF 50V
			COB025	79TH0363	C, CERAMIC 0.1UF 50V
			COB026	79TH0363	C, CERAMIC 0.1UF 50V
			COB027	79TH0363	C, CERAMIC 0.1UF 50V
			COB028	79TH0363	C, CERAMIC 0.1UF 50V
			COB029	79TH0363	C, CERAMIC 0.1UF 50V
			COB030	79TH0363	C, CERAMIC 0.1UF 50V
			COB031	79TH0363	C, CERAMIC 0.1UF 50V
			COB032	79TH0363	C, CERAMIC 0.1UF 50V
			COB033	79TH0363	C, CERAMIC 0.1UF 50V
			COB034	79TH0363	C, CERAMIC 0.1UF 50V
			COB035	79TH0363	C, CERAMIC 0.1UF 50V
			COB036	79TH0363	C, CERAMIC 0.1UF 50V
			COB037	79TH0363	C, CERAMIC 0.1UF 50V
			COB038	79TH0363	C, CERAMIC 0.1UF 50V
			COB039	79TH0363	C, CERAMIC 0.1UF 50V
			COB040	79TH0363	C, CERAMIC 0.1UF 50V
			COB041	79TH0363	C, CERAMIC 0.1UF 50V
			COB042	79TH0363	C, CERAMIC 0.1UF 50V
			COB043	79TH0363	C, CERAMIC 0.1UF 50V
			COB044	79TH0363	C, CERAMIC 0.1UF 50V
			COB045	79TH0363	C, CERAMIC 0.1UF 50V
			COB046	79TH0363	C, CERAMIC 0.1UF 50V
			COB047	79TH0363	C, CERAMIC 0.1UF 50V
			COB048	79TH0363	C, CERAMIC 0.1UF 50V
			COB049	79TH0363	C, CERAMIC 0.1UF 50V
			COB050	79TH0363	C, CERAMIC 0.1UF 50V

XM3750			XP3778		
SYNBOL	PART NO	PART NAME	SYNBOL	PART NO	PART NAME
			COB051	79TH0363	C, CERAMIC 0.1UF 50V
			COB052	79TH0363	C, CERAMIC 0.1UF 50V
			COB053	79TH0363	C, CERAMIC 0.1UF 50V
			COB054	79TH0365	C, ELEC 22UF 16V
			DOB001	79TH0719	ZENER DIODE RD5.1M-T1-B1
			DOB002	79TH0719	ZENER DIODE RD5.1M-T1-B1
			DOB003	79TH0717	DIODE 1S2838-T1
			DOB004	79TH0719	ZENER DIODE RD5.1M-T1-B1
			DOB005	79TH0719	ZENER DIODE RD5.1M-T1-B1
			DOB006	79TH0719	ZENER DIODE RD5.1M-T1-B1
			DOB007	79TH0719	ZENER DIODE RD5.1M-T1-B1
			DOB008	79TH0719	ZENER DIODE RD5.1M-T1-B1
			DOB009	79TH0719	ZENER DIODE RD5.1M-T1-B1
			DOB010	79TH0719	ZENER DIODE RD5.1M-T1-B1
			DOB011	79TH0719	ZENER DIODE RD5.1M-T1-B1
			DOB012	79TH0719	ZENER DIODE RD5.1M-T1-B1
			DOB013	79TH0719	ZENER DIODE RD5.1M-T1-B1
			DOB014	79TH0719	ZENER DIODE RD5.1M-T1-B1
			DOB015	79TH0719	ZENER DIODE RD5.1M-T1-B1
			DOB016	79TH0719	ZENER DIODE RD5.1M-T1-B1
			DOB017	79TH0717	DIODE 1S2838-T1
			DOB018	79TH0719	ZENER DIODE RD5.1M-T1-B1
			DOB019	79TH0719	ZENER DIODE RD5.1M-T1-B1
			DOB020	79TH0718	DIODE D1FS4-4063
			DOB021	79TH0720	ZENER DIODE RD5.6M-T1-B3
			DOB022	79TH0717	DIODE 1S2838-T1
			DOB023	79TH0717	DIODE 1S2838-T1
			DOB024	79TH0719	ZENER DIODE RD5.1M-T1-B1
			DOB025	79TH0719	ZENER DIODE RD5.1M-T1-B1
			DOB026	79TH0719	ZENER DIODE RD5.1M-T1-B1
			DOB027	79TH0719	ZENER DIODE RD5.1M-T1-B1
			DOB028	79TH0719	ZENER DIODE RD5.1M-T1-B1
			DOB029	79TH0719	ZENER DIODE RD5.1M-T1-B1
			DOB030	79TH0719	ZENER DIODE RD5.1M-T1-B1
			DOB031	79TH0719	ZENER DIODE RD5.1M-T1-B1
			DOB032	79TH0719	ZENER DIODE RD5.1M-T1-B1
			DOB033	79TH0719	ZENER DIODE RD5.1M-T1-B1
			DOB034	79TH0719	ZENER DIODE RD5.1M-T1-B1
			DOB035	79TH0719	ZENER DIODE RD5.1M-T1-B1
			DOB036	79TH0719	ZENER DIODE RD5.1M-T1-B1
			DOB037	79TH0719	ZENER DIODE RD5.1M-T1-B1
			DOB038	79TH0719	ZENER DIODE RD5.1M-T1-B1
			DOB039	79TH0719	ZENER DIODE RD5.1M-T1-B1
			DOB040	79TH0719	ZENER DIODE RD5.1M-T1-B1
			DOB041	79TH0719	ZENER DIODE RD5.1M-T1-B1
			DOB042	79TH0719	ZENER DIODE RD5.1M-T1-B1
			DOB043	79TH0717	DIODE 1S2838-T1
			DOB044	79TH0719	ZENER DIODE RD5.1M-T1-B1
			DOB045	79TH0719	ZENER DIODE RD5.1M-T1-B1
			DOB046	79TH0719	ZENER DIODE RD5.1M-T1-B1
			DOB047	79TH0719	ZENER DIODE RD5.1M-T1-B1
			DOB048	79TH0719	ZENER DIODE RD5.1M-T1-B1
			DOB049	79TH0719	ZENER DIODE RD5.1M-T1-B1
			DOB050	79TH0719	ZENER DIODE RD5.1M-T1-B1
			DOB051	79TH0719	ZENER DIODE RD5.1M-T1-B1
			DOB052	79TH0717	DIODE 1S2838-T1
			DOB053	79TH0717	DIODE 1S2838-T1
			DOB054	79TH0717	DIODE 1S2838-T1
			ICB001	79TH0754	IC MOS M5M80C85AFP2D7
			ICB002	79TH0764	IC M51943BML-600D
			ICB003	79TH0749	IC MOS HD74HC373FP-ER
			ICB004	79TH0735	IC MOS M27C256B-15XF1
			ICB005	79TH0753	IC MOS LH5116NA-10-E2
			ICB006	79TH0752	IC MOS HN58C65RFP25-TZ
			ICB007	79TH0745	IC MOS HD74HC32FP-ER
			ICB008	79TH0743	IC MOS HD74HC04FP-ER
			ICB009	79TH0747	IC MOS HD74HC138FP-ER
			ICB010	79TH0745	IC MOS HD74HC32FP-ER
			ICB011	79TH0757	IC MOS M5M82C54FP-T4
			ICB012	79TH0757	IC MOS M5M82C54FP-T4
			ICB013	79TH0756	IC MOS M5M82C54FP-T4
			ICB014	79TH0746	IC MOS HD74HC123AFP-ER
			ICB015	79TH0755	IC MOS M5M82C55AFP2T4
			ICB016	79TH0755	IC MOS M5M82C55AFP2T4
			ICB017	79TH0755	IC MOS M5M82C55AFP2T4
			ICB018	79TH0759	IC MOS M62352FP-75NC
			ICB019	79TH0759	IC MOS M62352FP-75NC
			ICB020	79TH0760	IC MOS M62354FP-70ND
			ICB021	79TH0748	IC MOS HD74HC148FP-ER
			ICB022	79TH0750	IC MOS HD74HC4040FP-ER
			ICB023	79TH0743	IC MOS HD74HC04FP-ER
			ICB024	79TH0744	IC MOS HD74HC08FP-ER
			ICB025	79TH0765	IC MOS UPC1093T-E1
			ICB026	79TH0761	IC MOS NJU8102KM-T1
			ICB027	79TH0762	IC NJM2902M-TE1
			ICB028	79TH0455	IC NJM2904M-TE3
			ICB029	79TH0758	IC MOS UPD4713GT-T1
			ICB030	79TH0452	IC MOS UPD4053BG-E1
			ICB031	79TH0751	IC MOS UPD74HC74G-E1
			ICB032	79TH0745	IC MOS HD74HC32FP-ER
			ICB033	79TH0763	IC NJM2403M-TE3
			MBB001	79TH0526	SCREW M3x8

XM3750			XP3778		
SYNBOL	PART NO	PART NAME	SYNBOL	PART NO	PART NAME
MD005	79TH0516	CARTON BOX (BOTTOM)			
MS001	79TH0830	CABINET FRONT 7020810019	MSB001	79TH0802	CONNECTOR PANEL (1)
			MS001	79TH0011	CABINET FRONT 7020190749
			QOB001	79TH0424	TR 2SC1623-T1-L5
			QOB002	79TH0424	TR 2SC1623-T1-L5
			QOB003	79TH0424	TR 2SC1623-T1-L5
			QOB004	79TH0423	TR 2SA812-T1-M5
			QOB005	79TH0423	TR 2SA812-T1-M5
			QOB006	79TH0424	TR 2SC1623-T1-L5
			QOB007	79TH0424	TR 2SC1623-T1-L5
			QOB008	79TH0388	TR 2SD1587-K
			QOB009	79TH0424	TR 2SC1623-T1-L5
			RNB001	79TH0741	R, NETWORK FXB-F9E 473J
			RNB002	79TH0741	R, NETWORK FXB-F9E 473J
			RNB003	79TH0741	R, NETWORK FXB-F9E 473J
			RNB004	79TH0741	R, NETWORK FXB-F9E 473J
			RNB005	79TH0741	R, NETWORK FXB-F9E 473J
			RNB006	79TH0741	R, NETWORK FXB-F9E 473J
			RNB007	79TH0741	R, NETWORK FXB-F9E 473J
			RNB008	79TH0741	R, NETWORK FXB-F9E 473J
			RNB009	79TH0741	R, NETWORK FXB-F9E 473J
			RNB010	79TH0741	R, NETWORK FXB-F9E 473J
			RNB011	79TH0741	R, NETWORK FXB-F9E 473J
			ROB001	79TH0221	R, CARBON 47K 1/10W
			ROB002	79TH0221	R, CARBON 47K 1/10W
			ROB003	79TH0221	R, CARBON 47K 1/10W
			ROB004	79TH0221	R, CARBON 47K 1/10W
			ROB005	79TH0221	R, CARBON 47K 1/10W
			ROB006	79TH0221	R, CARBON 47K 1/10W
			ROB007	79TH0221	R, CARBON 47K 1/10W
			ROB008	79TH0221	R, CARBON 47K 1/10W
			ROB009	79TH0200	R, CARBON 1K 1/10W
			ROB010	79TH0210	R, CARBON 5.6K 1/10W
			ROB011	79TH0202	R, CARBON 1.5K 1/10W
			ROB012	79TH0608	R, CARBON 82H 1/10W
			ROB013	79TH0618	R, METAL 1.8KH 1/6W
			ROB014	79TH0614	R, METAL 470H 1/6W
			ROB015	79TH0619	R, METAL 2.2KH 1/6W
			ROB016	79TH0618	R, METAL 1.8KH 1/6W
			ROB017	79TH0613	R, METAL 120H 1/6W
			ROB018	79TH0609	R, METAL 15H 1/6W
			ROB019	79TH0617	R, METAL 1KH 1/6W
			ROB020	79TH0616	R, METAL 820H 1/6W
			ROB021	79TH0614	R, METAL 470H 1/6W
			ROB022	79TH0615	R, METAL 680H 1/6W
			ROB023	79TH0620	R, METAL 4.7KH 1/6W
			ROB024	79TH0616	R, METAL 820H 1/6W
			ROB025	79TH0224	R, CARBON 100K 1/10W
			ROB026	79TH0194	R, CARBON 330H 1/10W
			ROB027	79TH0192	R, CARBON 220H 1/10W
			ROB028	79TH0192	R, CARBON 220H 1/10W
			ROB029	79TH0192	R, CARBON 220H 1/10W
			ROB030	79TH0192	R, CARBON 220H 1/10W
			ROB031	79TH0192	R, CARBON 220H 1/10W
			ROB032	79TH0192	R, CARBON 220H 1/10W
			ROB033	79TH0192	R, CARBON 220H 1/10W
			ROB034	79TH0192	R, CARBON 220H 1/10W
			ROB035	79TH0192	R, CARBON 220H 1/10W
			ROB036	79TH0192	R, CARBON 220H 1/10W
			ROB037	79TH0192	R, CARBON 220H 1/10W
			ROB038	79TH0192	R, CARBON 220H 1/10W
			ROB039	79TH0192	R, CARBON 220H 1/10W
			ROB040	79TH0192	R, CARBON 220H 1/10W
			ROB041	79TH0192	R, CARBON 220H 1/10W
			ROB042	79TH0192	R, CARBON 220H 1/10W
			ROB043	79TH0192	R, CARBON 220H 1/10W
			ROB044	79TH0192	R, CARBON 220H 1/10W
			ROB045	79TH0192	R, CARBON 220H 1/10W
			ROB046	79TH0192	R, CARBON 220H 1/10W
			ROB047	79TH0192	R, CARBON 220H 1/10W
			ROB048	79TH0192	R, CARBON 220H 1/10W
			ROB049	79TH0192	R, CARBON 220H 1/10W
			ROB050	79TH0192	R, CARBON 220H 1/10W
			ROB051	79TH0192	R, CARBON 220H 1/10W
			ROB052	79TH0192	R, CARBON 220H 1/10W
			ROB053	79TH0192	R, CARBON 220H 1/10W
			ROB054	79TH0192	R, CARBON 220H 1/10W
			ROB055	79TH0571	R, FUSE 18H 1/2W
			ROB056	79TH0224	R, CARBON 100K 1/10W
			ROB057	79TH0213	R, CARBON 10K 1/10W
			ROB058	79TH0200	R, CARBON 1K 1/10W
			ROB059	79TH0200	R, CARBON 1K 1/10W
			ROB060	79TH0221	R, CARBON 47K 1/10W
			ROB061	79TH0213	R, CARBON 10K 1/10W
			ROB062	79TH0221	R, CARBON 47K 1/10W
			ROB063	79TH0213	R, CARBON 10K 1/10W
			ROB064	79TH0213	R, CARBON 10K 1/10W
			ROB065	79TH0225	R, CARBON 150K 1/10W
			ROB066	79TH0200	R, CARBON 1K 1/10W
			ROB067	79TH0213	R, CARBON 10K 1/10W
			ROB068	79TH0213	R, CARBON 10K 1/10W
			ROB069	79TH0221	R, CARBON 47K 1/10W
			ROB070	79TH0612	R, METAL 100H 1/6W

XM3750			XP3778		
SYNBOL	PART NO	PART NAME	SYNBOL	PART NO	PART NAME
			ROB071	79TH0610	R, METAL 33H 1/6W
			ROB072	79TH0614	R, METAL 470H 1/6W
			ROB073	79TH0221	R, CARBON 47K 1/10W
			ROB074	79TH0612	R, METAL 100H 1/6W
			ROB075	79TH0611	R, METAL 68H 1/6W
			ROB076	79TH0192	R, CARBON 220H 1/10W
			ROB077	79TH0192	R, CARBON 220H 1/10W
			ROB078	79TH0221	R, CARBON 47K 1/10W
			ROB079	79TH0221	R, CARBON 47K 1/10W
			ROB080	79TH0221	R, CARBON 47K 1/10W
			ROB081	79TH0221	R, CARBON 47K 1/10W
			ROB082	79TH0204	R, CARBON 2.2K 1/10W
			ROB083	79TH0213	R, CARBON 10K 1/10W
			ROB084	79TH0204	R, CARBON 2.2K 1/10W
			ROB085	79TH0206	R, CARBON 3.3K 1/10W
			ROB086	79TH0225	R, CARBON 150K 1/10W
			ROB087	79TH0209	R, CARBON 4.7K 1/10W
			ROB088	79TH0209	R, CARBON 4.7K 1/10W
			ROB089	79TH0225	R, CARBON 150K 1/10W
			ROB090	79TH0074	R, CARBON 4.7K 1/4W
			ROB091	79TH0211	R, CARBON 6.8K 1/10W
			ROB092	79TH0192	R, CARBON 220H 1/10W
			ROB094	79TH0051	R, CARBON 10KH 1/4W
			ROB095	79TH0051	R, CARBON 10KH 1/4W
			ROB096	79TH0581	R, METAL 47H 2W
			SOB001	79TH0799	TACT SWITCH
			SOB002	79TH0799	TACT SWITCH
			SOB003	79TH0799	TACT SWITCH
			SOB004	79TH0799	TACT SWITCH
			SOB005	79TH0799	TACT SWITCH
			SOB006	79TH0799	TACT SWITCH
			SOB007	79TH0791	SLIDE SWITCH
			XOB001	79TH0742	CRYSTAL TQC-211A-8R (10MH)

DIFFERENTIAL PART LIST BETWEEN XM3750 and XP3778G

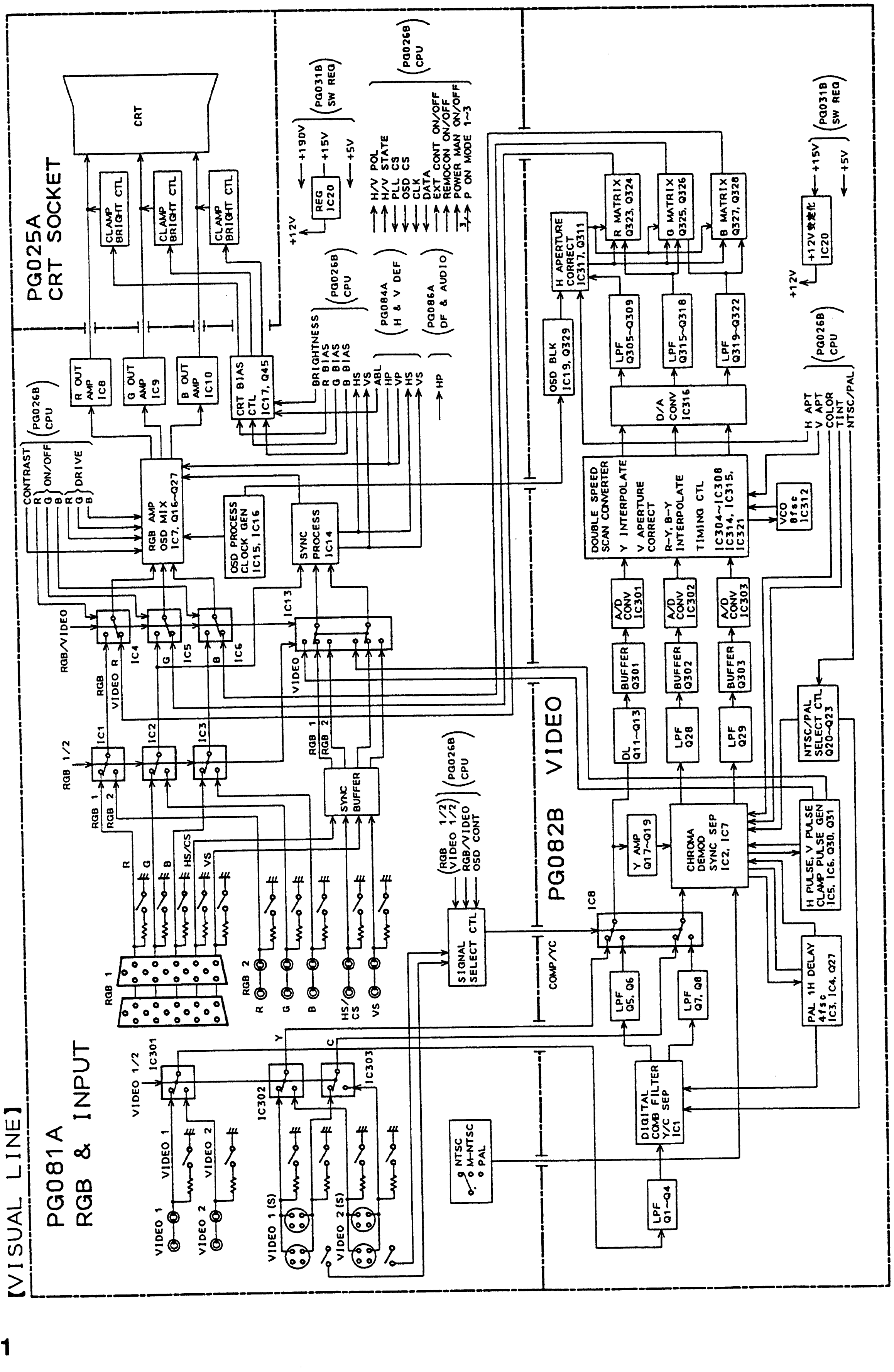
XM3750			XP3778G		
SYNBOL	PART NO	PART NAME	SYNBOL	PART NO	PART NAME
	79TH0023	USER'S MANUAL XP3778		79TH0025	USER'S MANUAL
	79TH0034	SW REG PWB ASSY PG031B		79TH0042	CPU PWB ASSY PG026B
				79TH0547	BARCODE LABEL
	79TH0829	CPU PWB ASSY (XM) PG026XM			
	79TH0831	CARTON BOX (TOP) 8887000240			
				79TH0834	WARNING LABEL (2)
				79TH0835	SERIAL NO. LABEL
				79TH0836	CARTON BOX (TOP)
				79TH0837	CARTON BOX (BOTTOM)
				79TH0841	SW REG PWB ASSY PG031B
			COB001	79TH0356	C, CERAMIC 33PF 50V
			COB002	79TH0356	C, CERAMIC 33PF 50V
			COB003	79TH0364	C, ELEC 10UF 16V
			COB004	79TH0673	C, TANTAL 0.47UF 16V
			COB005	79TH0672	C, CERAMIC 2700PF 50V
			COB006	79TH0673	C, TANTAL 0.47UF 16V
			COB007	79TH0363	C, CERAMIC 0.1UF 50V
			COB008	79TH0675	C, ELEC 10UF 25V
			COB009	79TH0675	C, ELEC 10UF 25V
			COB010	79TH0675	C, ELEC 10UF 25V
			COB011	79TH0675	C, ELEC 10UF 25V
			COB012	79TH0674	C, ELEC 47UF 16V
			COB013	79TH0363	C, CERAMIC 0.1UF 50V
			COB014	79TH0676	C, ELEC 22UF 25V
			COB015	79TH0363	C, CERAMIC 0.1UF 50V
			COB016	79TH0674	C, ELEC 47UF 16V
			COB017	79TH0674	C, ELEC 47UF 16V
			COB018	79TH0365	C, ELEC 22UF 16V
			COB019	79TH0364	C, ELEC 10UF 16V
			COB020	79TH0365	C, ELEC 22UF 16V
			COB021	79TH0363	C, CERAMIC 0.1UF 50V
			COB022	79TH0363	C, CERAMIC 0.1UF 50V
			COB023	79TH0363	C, CERAMIC 0.1UF 50V
			COB024	79TH0363	C, CERAMIC 0.1UF 50V
			COB025	79TH0363	C, CERAMIC 0.1UF 50V
			COB026	79TH0363	C, CERAMIC 0.1UF 50V
			COB027	79TH0363	C, CERAMIC 0.1UF 50V
			COB028	79TH0363	C, CERAMIC 0.1UF 50V
			COB029	79TH0363	C, CERAMIC 0.1UF 50V
			COB030	79TH0363	C, CERAMIC 0.1UF 50V
			COB031	79TH0363	C, CERAMIC 0.1UF 50V
			COB032	79TH0363	C, CERAMIC 0.1UF 50V
			COB033	79TH0363	C, CERAMIC 0.1UF 50V
			COB034	79TH0363	C, CERAMIC 0.1UF 50V
			COB035	79TH0363	C, CERAMIC 0.1UF 50V
			COB036	79TH0363	C, CERAMIC 0.1UF 50V
			COB037	79TH0363	C, CERAMIC 0.1UF 50V
			COB038	79TH0363	C, CERAMIC 0.1UF 50V
			COB039	79TH0363	C, CERAMIC 0.1UF 50V
			COB040	79TH0363	C, CERAMIC 0.1UF 50V
			COB041	79TH0363	C, CERAMIC 0.1UF 50V
			COB042	79TH0363	C, CERAMIC 0.1UF 50V
			COB043	79TH0363	C, CERAMIC 0.1UF 50V
			COB044	79TH0363	C, CERAMIC 0.1UF 50V
			COB045	79TH0363	C, CERAMIC 0.1UF 50V
			COB046	79TH0363	C, CERAMIC 0.1UF 50V
			COB047	79TH0363	C, CERAMIC 0.1UF 50V
			COB048	79TH0363	C, CERAMIC 0.1UF 50V
			COB049	79TH0363	C, CERAMIC 0.1UF 50V
			COB050	79TH0363	C, CERAMIC 0.1UF 50V
			COB051	79TH0363	C, CERAMIC 0.1UF 50V
			COB052	79TH0363	C, CERAMIC 0.1UF 50V
			COB053	79TH0363	C, CERAMIC 0.1UF 50V
			COB054	79TH0365	C, ELEC 22UF 16V
			DOB001	79TH0719	ZENER DIODE RD5.1M-T1-B1
			DOB002	79TH0719	ZENER DIODE RD5.1M-T1-B1
			DOB003	79TH0719	ZENER DIODE RD5.1M-T1-B1
			DOB004	79TH0719	ZENER DIODE RD5.1M-T1-B1
			DOB005	79TH0719	ZENER DIODE RD5.1M-T1-B1
			DOB006	79TH0719	ZENER DIODE RD5.1M-T1-B1
			DOB007	79TH0719	ZENER DIODE RD5.1M-T1-B1
			DOB008	79TH0719	ZENER DIODE RD5.1M-T1-B1
			DOB009	79TH0719	ZENER DIODE RD5.1M-T1-B1
			DOB010	79TH0719	ZENER DIODE RD5.1M-T1-B1
			DOB011	79TH0719	ZENER DIODE RD5.1M-T1-B1
			DOB012	79TH0719	ZENER DIODE RD5.1M-T1-B1
			DOB013	79TH0719	ZENER DIODE RD5.1M-T1-B1
			DOB014	79TH0719	ZENER DIODE RD5.1M-T1-B1
			DOB015	79TH0719	ZENER DIODE RD5.1M-T1-B1
			DOB016	79TH0719	ZENER DIODE RD5.1M-T1-B1
			DOB017	79TH0717	DIODE 1S2838S-T1
			DOB018	79TH0719	ZENER DIODE RD5.1M-T1-B1
			ZOB019	79TH0719	ZENER DIODE RD5.1M-T1-B1
			DOB020	79TH0718	DIODE D1FS4-4063
			DOB021	79TH0720	ZENER DIODE RD5.6M-T1-B3
			DOB022	79TH0717	DIODE 1S2838-T1
			DOB023	79TH0717	DIODE 1S2838-T1
			DOB024	79TH0719	ZENER DIODE RD5.1M-T1-B1

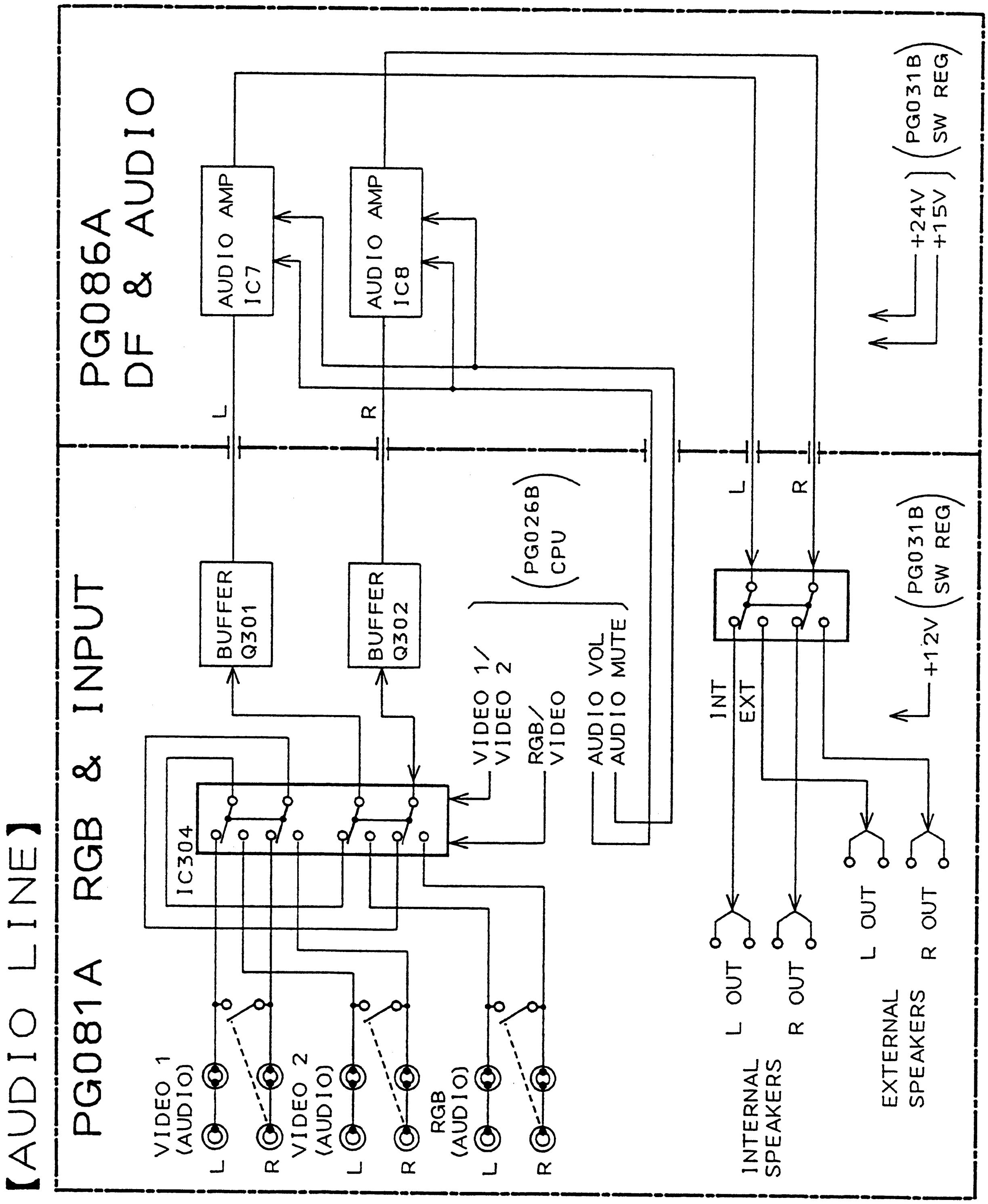
XM3750			XP3778G		
SYNBOL	PART NO	PART NAME	SYNBOL	PART NO	PART NAME
			DOB025	79TH0719	ZENER DIODE RD5.1M-T1-B1
			DOB026	79TH0719	ZENER DIODE RD5.1M-T1-B1
			DOB027	79TH0719	ZENER DIODE RD5.1M-T1-B1
			DOB028	79TH0719	ZENER DIODE RD5.1M-T1-B1
			DOB029	79TH0719	ZENER DIODE RD5.1M-T1-B1
			DOB030	79TH0719	ZENER DIODE RD5.1M-T1-B1
			DOB031	79TH0719	ZENER DIODE RD5.1M-T1-B1
			DOB032	79TH0719	ZENER DIODE RD5.1M-T1-B1
			DOB033	79TH0719	ZENER DIODE RD5.1M-T1-B1
			DOB034	79TH0719	ZENER DIODE RD5.1M-T1-B1
			DOB035	79TH0719	ZENER DIODE RD5.1M-T1-B1
			DOB036	79TH0719	ZENER DIODE RD5.1M-T1-B1
			DOB037	79TH0719	ZENER DIODE RD5.1M-T1-B1
			DOB038	79TH0719	ZENER DIODE RD5.1M-T1-B1
			DOB039	79TH0719	ZENER DIODE RD5.1M-T1-B1
			DOB040	79TH0719	ZENER DIODE RD5.1M-T1-B1
			DOB041	79TH0719	ZENER DIODE RD5.1M-T1-B1
			DOB042	79TH0719	ZENER DIODE RD5.1M-T1-B1
			DOB043	79TH0717	DIODE 1S2838-T1
			DOB044	79TH0719	ZENER DIODE RD5.1M-T1-B1
			DOB045	79TH0719	ZENER DIODE RD5.1M-T1-B1
			DOB046	79TH0719	ZENER DIODE RD5.1M-T1-B1
			COB047	79TH0719	ZENER DIODE RD5.1M-T1-B1
			DOB048	79TH0719	ZENER DIODE RD5.1M-T1-B1
			DOB049	79TH0719	ZENER DIODE RD5.1M-T1-B1
			DOB050	79TH0719	ZENER DIODE RD5.1M-T1-B1
			DOB051	79TH0719	ZENER DIODE RD5.1M-T1-B1
			DOB052	79TH0717	DIODE 1S2838-T1
			DOB053	79TH0717	DIODE 1S2838-T1
			DOB054	79TH0717	DIODE 1S2838-T1
			ICB001	79TH0754	IC MOS M5M80C85AFP2D7
			ICB002	79TH0764	IC M51943BML-600D
			ICB003	79TH0749	IC MOS HD74HC373FP-ER
			ICB004	79TH0735	IC MOS M27C256B-15XF1
			ICB005	79TH0753	IC MOS LH5116NA-10-E2
			ICB006	79TH0752	IC MOS HN58C65RFP25-TZ
			ICB007	79TH0745	IC MOS HD74HC32FP-ER
			ICB008	79TH0743	IC MOS HD74HC04FP-ER
			ICB009	79TH0747	IC MOS HD74HC138FP-ER
			ICB010	79TH0745	IC MOS HD74HC32FP-ER
			ICB011	79TH0757	IC MOS M5M82C54FP-T4
			ICB012	79TH0757	IC MOS M5M82C54FP-T4
			ICB013	79TH0756	IC MOS M5M82C54FP-T4
			ICB014	79TH0746	IC MOS HD74HC123AFP-ER
			ICB015	79TH0755	IC MOS M5M82C55AFP2T4
			ICB016	79TH0755	IC MOS M5M82C55AFP2T4
			ICB017	79TH0755	IC MOS M5M82C55AFP2T4
			ICB018	79TH0759	IC MOS M62352FP-75NC
			ICB019	79TH0759	IC MOS M62352FP-75NC
			ICB020	79TH0760	IC MOS M62354FP-70ND
			ICB021	79TH0748	IC MOS HD74HC148FP-ER
			ICB022	79TH0750	IC MOS HD74HC4040FP-ER
			ICB023	79TH0743	IC MOS HD74HC04FP-ER
			ICB024	79TH0744	IC MOS HD74HC08FP-ER
			ICB025	79TH0765	IC MOS UPC1093T-E1
			ICB026	79TH0761	IC MOS NJU8102KM-T1
			ICB027	79TH0762	IC NJM2902M-TE1
			ICB028	79TH0455	IC NJM2904M-TE3
			ICB029	79TH0758	IC MOS UPD4713GT-T1
			ICB030	79TH0452	MOS UPD4053BG-E1
			ICB031	79TH0751	IC MOS UPD74HC74G-E1
			ICB032	79TH0745	IC MOS HD74HC32FP-ER
			ICB033	79TH0763	IC NJM2403M-TE3
			MBB001	79TH0526	SCREW M3x8
MD005	79TH0516	CARTON BOX (BOTTOM)			
			MSB001	79TH0802	CONNECTOR PANEL (1)
MS001	79TH0830	CABINET FRONT 7020810019	MS001	79TH0011	CABINET FRONT 7020190749
			QOB001	79TH0424	TR 2SC1623-T1-L5
			QOB002	79TH0424	TR 2SC1623-T1-L5
			QOB003	79TH0424	TR 2SC1623-T1-L5
			QOB004	79TH0423	TR 2SA812-T1-M5
			QOB005	79TH0423	TR 2SA812-T1-M5
			QOB006	79TH0424	TR 2SC1623-T1-L5
			QOB007	79TH0424	TR 2SC1623-T1-L5
			QOB008	79TH0388	TR 2SD1587-K
			QOB009	79TH0424	TR 2SC1623-T1-L5
			RNB001	79TH0741	R, NETWORK FXR-F9E 473J
			RNB002	79TH0741	R, NETWORK FXR-F9E 473J
			RNB003	79TH0741	R, NETWORK FXR-F9E 473J
			RNB004	79TH0741	R, NETWORK FXR-F9E 473J
			RNB005	79TH0741	R, NETWORK FXR-F9E 473J
			RNB006	79TH0741	R, NETWORK FXR-F9E 473J
			RNB007	79TH0741	R, NETWORK FXR-F9E 473J
			RNB008	79TH0741	R, NETWORK FXR-F9E 473J
			RNB009	79TH0741	R, NETWORK FXR-F9E 473J
			RNB010	79TH0741	R, NETWORK FXR-F9E 473J
			RNB011	79TH0741	R, NETWORK FXR-F9E 473J
			ROB001	79TH0221	R, CARBON 47K 1/10W
			ROB002	79TH0221	R, CARBON 47K 1/10W
			ROB003	79TH0221	R, CARBON 47K 1/10W
			ROB004	79TH0221	R, CARBON 47K 1/10W

XM3750			XP3778G		
SYNBOL	PART NO	PART NAME	SYNBOL	PART NO	PART NAME
			ROB005	79TH0221	R, CARBON 47K 1/10W
			ROB006	79TH0221	R, CARBON 47K 1/10W
			ROB007	79TH0221	R, CARBON 47K 1/10W
			ROB008	79TH0221	R, CARBON 47K 1/10W
			ROB009	79TH0200	R, CARBON 1K 1/10W
			ROB010	79TH0210	R, CARBON 5.6K 1/10W
			ROB011	79TH0202	R, CARBON 1.5K 1/10W
			ROB012	79TH0608	R, CARBON 82H 1/10W
			ROB013	79TH0618	R, METAL 1.8KH 1/6W
			ROB014	79TH0614	R, METAL 470H 1/6W
			ROB015	79TH0619	R, METAL 2.2KH 1/6W
			ROB016	79TH0618	R, METAL 1.8KH 1/6W
			ROB017	79TH0613	R, METAL 120H 1/6W
			ROB018	79TH0609	R, METAL 15H 1/6W
			ROB019	79TH0617	R, METAL 1KH 1/6W
			ROB020	79TH0616	R, METAL 820H 1/6W
			ROB021	79TH0614	R, METAL 470H 1/6W
			ROB022	79TH0615	R, METAL 680H 1/6W
			ROB023	79TH0620	R, METAL 4.7KH 1/6W
			ROB024	79TH0616	R, METAL 820H 1/6W
			ROB025	79TH0224	R, CARBON 100K 1/10W
			ROB026	79TH0194	R, CARBON 330H 1/10W
			ROB027	79TH0192	R, CARBON 220H 1/10W
			ROB028	79TH0192	R, CARBON 220H 1/10W
			ROB029	79TH0192	R, CARBON 220H 1/10W
			ROB030	79TH0192	R, CARBON 220H 1/10W
			ROB031	79TH0192	R, CARBON 220H 1/10W
			ROB032	79TH0192	R, CARBON 220H 1/10W
			ROB033	79TH0192	R, CARBON 220H 1/10W
			ROB034	79TH0192	R, CARBON 220H 1/10W
			ROB035	79TH0192	R, CARBON 220H 1/10W
			ROB036	79TH0192	R, CARBON 220H 1/10W
			ROB037	79TH0221	R, CARBON 47K 1/10W
			ROB038	79TH0192	R, CARBON 220H 1/10W
			ROB039	79TH0192	R, CARBON 220H 1/10W
			ROB040	79TH0192	R, CARBON 220H 1/10W
			ROB041	79TH0192	R, CARBON 220H 1/10W
			ROB042	79TH0192	R, CARBON 220H 1/10W
			ROB043	79TH0192	R, CARBON 220H 1/10W
			ROB044	79TH0192	R, CARBON 220H 1/10W
			ROB045	79TH0192	R, CARBON 220H 1/10W
			ROB046	79TH0192	R, CARBON 220H 1/10W
			ROB047	79TH0192	R, CARBON 220H 1/10W
			ROB048	79TH0192	R, CARBON 220H 1/10W
			ROB049	79TH0192	R, CARBON 220H 1/10W
			ROB050	79TH0192	R, CARBON 220H 1/10W
			ROB051	79TH0192	R, CARBON 220H 1/10W
			ROB052	79TH0192	R, CARBON 220H 1/10W
			ROB053	79TH0192	R, CARBON 220H 1/10W
			ROB054	79TH0192	R, CARBON 220H 1/10W
			ROB055	79TH0571	R, FUSE 18H 1/2W
			ROB056	79TH0224	R, CARBON 100K 1/10W
			ROB057	79TH0213	R, CARBON 10K 1/10W
			ROB058	79TH0200	R, CARBON 1K 1/10W
			ROB059	79TH0200	R, CARBON 1K 1/10W
			ROB060	79TH0221	R, CARBON 47K 1/10W
			ROB061	79TH0213	R, CARBON 10K 1/10W
			ROB062	79TH0221	R, CARBON 47K 1/10W
			ROB063	79TH0213	R, CARBON 10K 1/10W
			ROB064	79TH0213	R, CARBON 10K 1/10W
			ROB065	79TH0225	R, CARBON 150K 1/10W
			ROB066	79TH0200	R, CARBON 1K 1/10W
			ROB067	79TH0213	R, CARBON 10K 1/10W
			ROB068	79TH0213	R, CARBON 10K 1/10W
			ROB069	79TH0221	R, CARBON 47K 1/10W
			ROB070	79TH0612	R, METAL 100H 1/6W
			ROB071	79TH0610	R, METAL 33H 1/6W
			ROB072	79TH0614	R, METAL 470H 1/6W
			ROB073	79TH0221	R, CARBON 47K 1/10W
			ROB074	79TH0612	R, METAL 100H 1/6W
			ROB075	79TH0611	R, METAL 68H 1/6W
			ROB076	79TH0192	R, CARBON 220H 1/10W
			ROB077	79TH0192	R, CARBON 220H 1/10W
			ROB078	79TH0221	R, CARBON 47K 1/10W
			ROB079	79TH0221	R, CARBON 47K 1/10W
			ROB080	79TH0221	R, CARBON 47K 1/10W
			ROB081	79TH0221	R, CARBON 47K 1/10W
			ROB082	79TH0204	R, CARBON 2.2K 1/10W
			ROB083	79TH0213	R, CARBON 10K 1/10W
			ROB084	79TH0204	R, CARBON 2.2K 1/10W
			ROB085	79TH0206	R, CARBON 3.3K 1/10W
			ROB086	79TH0225	R, CARBON 150K 1/10W
			ROB087	79TH0209	R, CARBON 4.7K 1/10W
			ROB088	79TH0209	R, CARBON 4.7K 1/10W
			ROB089	79TH0225	R, CARBON 150K 1/10W
			ROB090	79TH0074	R, CARBON 4.7K 1/4W
			ROB091	79TH0211	R, CARBON 6.8K 1/10W

XM3750			XP3778G		
SYNBOL	PART NO	PART NAME	SYNBOL	PART NO	PART NAME
			ROB092	79TH0192	R, CARBON 220H 1/10W
			ROB094	79TH0051	R, CARBON 10KH 1/4W
			ROB095	79TH0051	R, CARBON 10KH 1/4W
			ROB096	79TH0581	R, METAL 47H 2W
			SOB001	79TH0799	TACT SWITCH
			SOB002	79TH0799	TACT SWITCH
			SOB003	79TH0799	TACT SWITCH
			SOB004	79TH0799	TACT SWITCH
			SOB005	79TH0799	TACT SWITCH
			SOB006	79TH0799	TACT SWITCH
			SOB007	79TH0791	SLIDE SWITCH
			XOB001	79TH0742	CRYSTAL TQC-211A-8R (10MH)

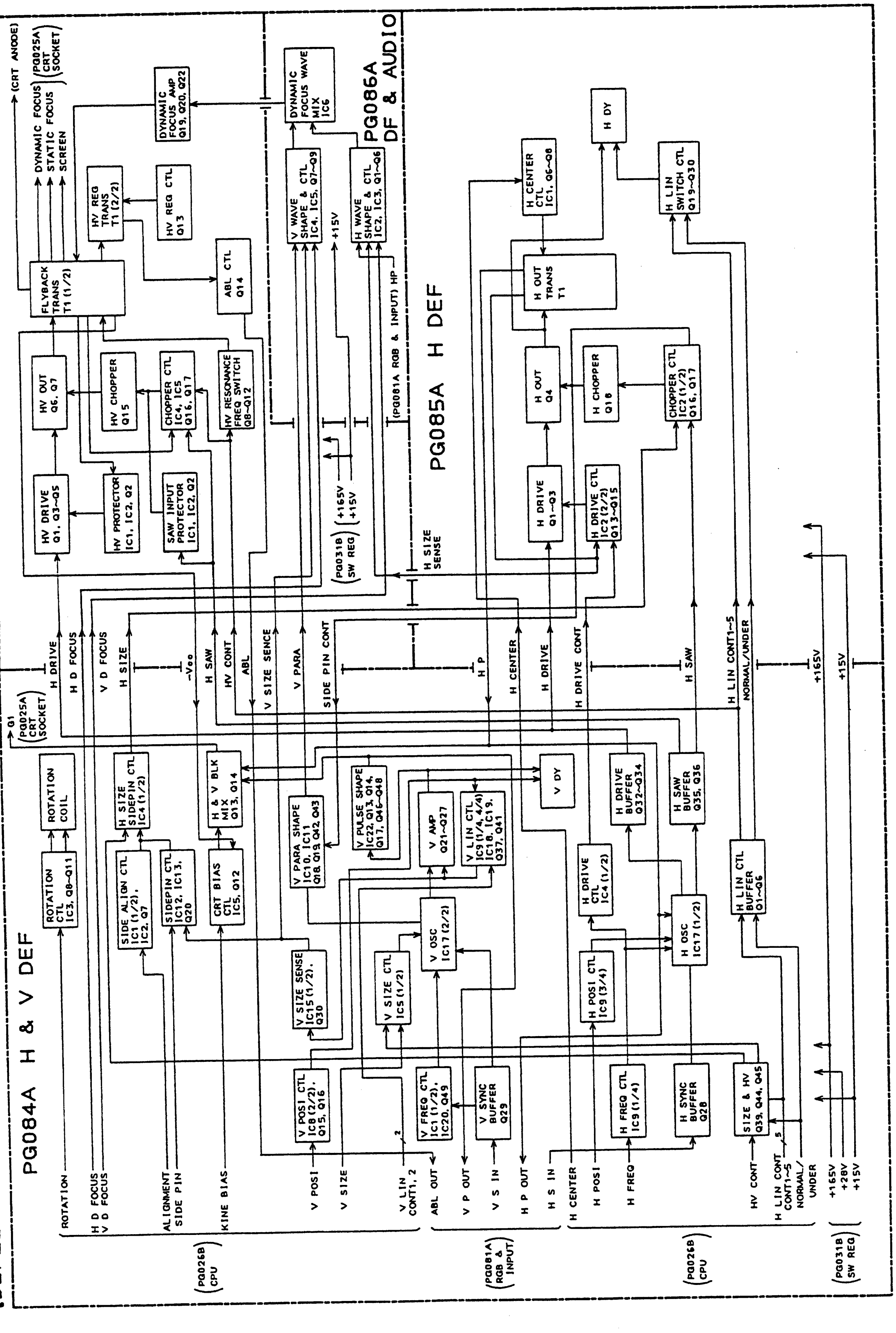
BLOCK DIAGRAM


[VISUAL LINE]
PG081A RGB & INPUT
PG025A CRT SOCKET
PG082B VIDEO
CRT
CLAMP BRIGHT CTL
R OUT AMP IC8
G OUT AMP IC9
B OUT AMP IC10
CRT BIAS CTL IC17, Q45
BRIGHTNESS
R BIAS
G BIAS
B BIAS
HS
VS
ABL
HP
VP
HS
VS
HP
(PG026B CPU)
(PG084A H & V DEF)
(PG086A DF & AUDIO)
+12V
REG IC20
+190V
+15V
+5V
(PG031B SW REG)
H/V POL
H/V STATE
PLL CS
OSD CS
CLK
DATA
EXT CONT ON/OFF
REMOCON ON/OFF
POWER MAN ON/OFF
P ON MODE 1~3
CONTRAST
R G B ON/OFF
R G B DRIVE
RGB AMP OSD MIX IC7, Q16~Q27
OSD PROCESS CLOCK GEN IC15, IC16
SYNC PROCESS IC14
RGB/VIDEO
IC4
IC5
IC6
IC13
RGB
VIDEO R
G
B
VIDEO
RGB 1/2
IC1
IC2
IC3
RGB 1
RGB 2
SYNC BUFFER
R
G
B
HS/CS
VS
RGB 1
RGB 2
(RGB 1/2)
(VIDEO 1/2)
RGB/VIDEO
OSD CONT
SIGNAL SELECT CTL
COMP/YC
NTSC
M-NTSC
PAL
VIDEO 1/2
IC301
IC302
IC303
Y
C
VIDEO 1
VIDEO 2
VIDEO 1 (S)
VIDEO 2 (S)
OSD BLK IC19, Q329
H APERTURE CORRECT IC317, Q311
R MATRIX Q323, Q324
G MATRIX Q325, Q326
B MATRIX Q327, Q328
LPF Q305~Q309
LPF Q315~Q318
LPF Q319~Q322
D/A CONV IC316
DOUBLE SPEED SCAN CONVERTER
Y INTERPOLATE
V APERTURE CORRECT
R-Y, B-Y INTERPOLATE
TIMING CTL
IC304~IC308
IC314, IC315, IC321
VCO 8fsc IC312
H APT
V APT
COLOR
TINT
NTSC/PAL
+12V
+12V安定化 IC20
+15V
+5V
A/D CONV IC301
A/D CONV IC302
A/D CONV IC303
BUFFER Q301
BUFFER Q302
BUFFER Q303
DL Q11~Q13
LPF Q28
LPF Q29
NTSC/PAL SELECT CTL Q20~Q23
Y AMP Q17~Q19
CHROMA DEMOD SYNC SEP IC2, IC7
H PULSE, V PULSE CLAMP PULSE GEN IC5, IC6, Q30, Q31
IC8
LPF Q5, Q6
LPF Q7, Q8
PAL 1H DELAY 4fsc IC3, IC4, Q27
DIGITAL COMB FILTER Y/C SEP IC1
LPF Q1~Q4

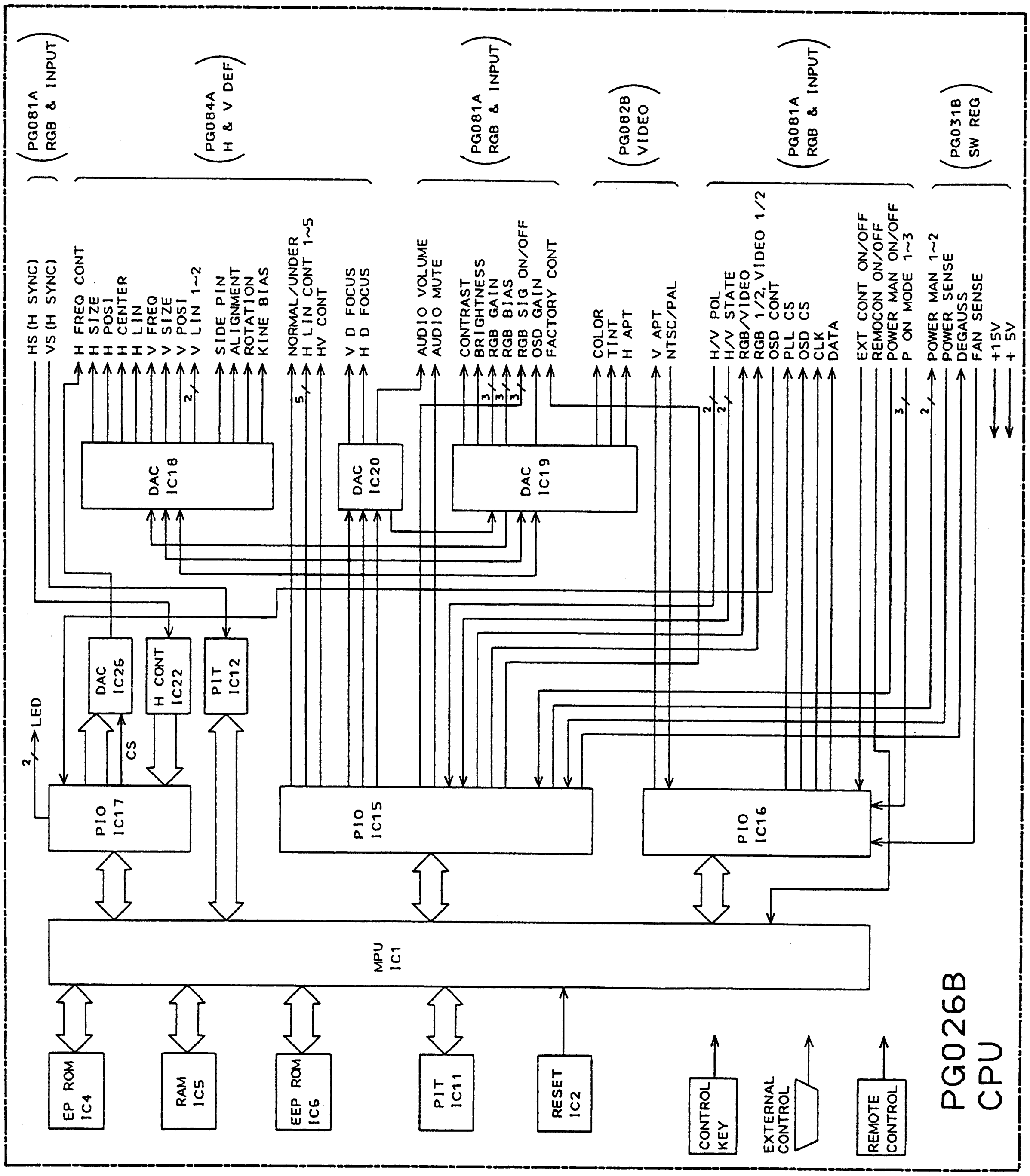

【AUDIO LINE】
PG081A RGB & INPUT
PG086A DF & AUDIO
VIDEO 1 (AUDIO)
L
R
VIDEO 2 (AUDIO)
L
R
RGB (AUDIO)
L
R
IC304
BUFFER Q301
BUFFER Q302
AUDIO AMP IC7
AUDIO AMP IC8
L
R
VIDEO 1/ VIDEO 2
RGB/ VIDEO
AUDIO VOL
AUDIO MUTE
(PG026B CPU)
L
R
INT
EXT
INTERNAL SPEAKERS
L OUT
R OUT
EXTERNAL SPEAKERS
L OUT
R OUT
+12V
(PG031B SW REG)
+24V
+15V
(PG031B SW REG)

BLOCK DIAGRAM

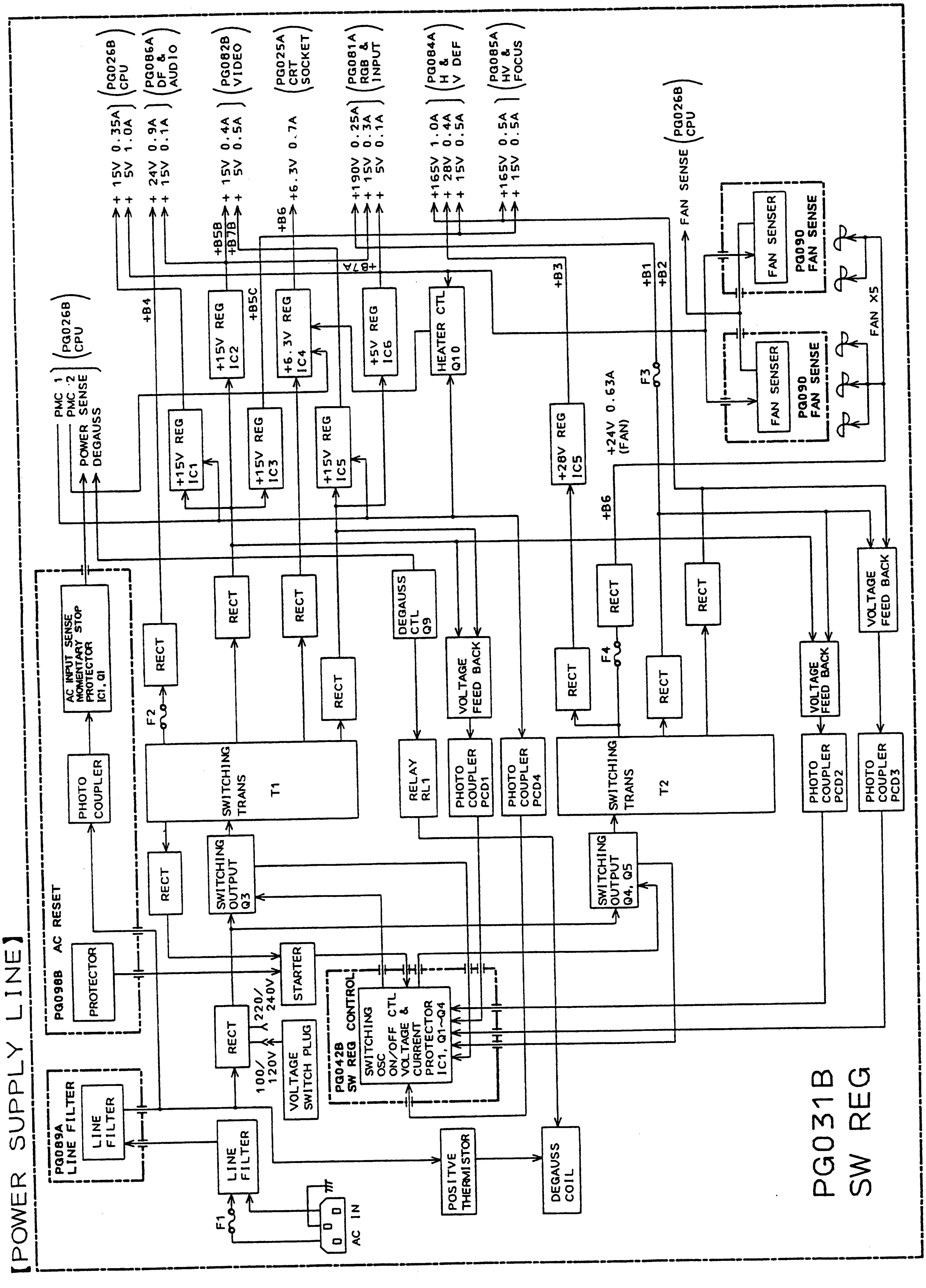
[DEFLECTION, HIGH VOLTAGE LINE]


PG084A H & V DEF
PG085A H DEF
PG086A DF & AUDIO
(CRT ANODE)
DYNAMIC FOCUS
STATIC FOCUS
SCREEN
(PG025A CRT SOCKET)
DYNAMIC FOCUS AMP Q19, Q20, Q22
DYNAMIC FOCUS WAVE MIX IC6
HV REG TRANS T1 (2/2)
HV REG CTL Q13
FLYBACK TRANS T1 (1/2)
ABL CTL Q14
V WAVE SHAPE & CTL IC4, IC5, Q7~Q9
H WAVE SHAPE & CTL IC2, IC3, Q1~Q6
+15V
HV OUT Q6, Q7
HV CHOPPER Q15
CHOPPER CTL IC4, IC5 Q16, Q17
HV RESONANCE FREQ SWITCH Q8~Q12
HV DRIVE Q1, Q3~Q5
HV PROTECTOR IC1, IC2, Q2
SAW INPUT PROTECTOR IC1, IC2, Q2
(PG031B SW REG)
+165V
+15V
(PG081A RGB & INPUT) HP
H SIZE SENSE
H CENTER CTL IC1, Q6~Q8
H DY
H LIN SWITCH CTL Q19~Q30
H OUT TRANS T1
H OUT Q4
H CHOPPER Q18
CHOPPER CTL IC2 (1/2) Q16, Q17
H DRIVE Q1~Q3
H DRIVE CTL IC2 (2/2) Q13~Q15
Q1
(PG025A CRT SOCKET)
H DRIVE
H D FOCUS
V D FOCUS
H SIZE
-Vcc
H SAW
HV CONT
ABL
V SIZE SENCE
V PARA
SIDE PIN CONT
HP
H CENTER
H DRIVE
H DRIVE CONT
H SAW
H LIN CONT1~5
NORMAL/UNDER
+165V
+15V
ROTATION COIL
ROTATION CTL IC3, Q8~Q11
H SIZE SIDEPIN CTL IC4 (1/2)
SIDE ALIGN CTL IC1 (1/2), IC2, Q7
SIDEPIN CTL IC12, IC13, Q20
H & V BLK MIX Q13, Q14
CRT BIAS CTL IC5, Q12
V PARA SHAPE IC10, IC11 Q18, Q19, Q42, Q43
V PULSE SHAPE IC22, Q13, Q14, Q17, Q46~Q48
V AMP Q21~Q27
V LIN CTL IC9 (1/4, 4/4) IC18, IC19, Q37, Q41
V DY
V SIZE SENSE IC15 (1/2), Q30
V SIZE CTL IC5 (1/2)
V OSC IC17 (2/2)
H DRIVE BUFFER Q32~Q34
H SAW BUFFER Q35, Q36
H DRIVE CTL IC4 (1/2)
H OSC IC17 (1/2)
H LIN CTL BUFFER Q1~Q6
H POSI CTL IC9 (3/4)
V POSI CTL IC8 (2/2), Q15, Q16
V FREQ CTL IC1 (1/2), IC20, Q49
V SYNC BUFFER Q29
H FREQ CTL IC9 (1/4)
H SYNC BUFFER Q28
SIZE & HV Q39, Q44, Q45
2
5
ROTATION
H D FOCUS
V D FOCUS
ALIGNMENT
SIDE PIN
KINE BIAS
V POSI
V SIZE
V LIN CONT1, 2
ABL OUT
V P OUT
V S IN
H P OUT
H S IN
H CENTER
H POSI
H FREQ
HV CONT
H LIN CONT CONT1~5
NORMAL/UNDER
+165V
+28V
+15V
(PG026B CPU)
(PG081A RGB & INPUT)
(PG026B CPU)
(PG031B SW REG)

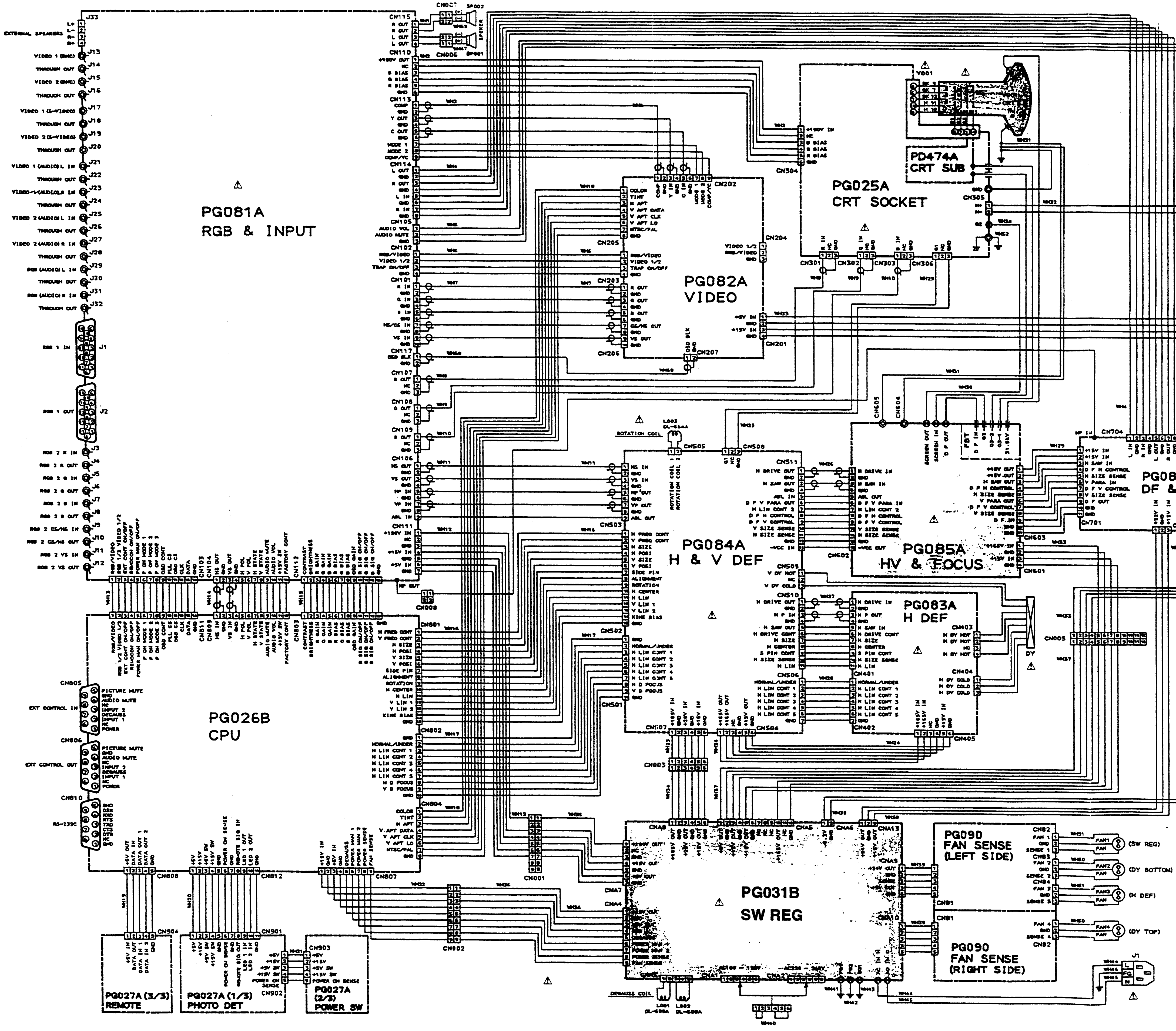
【MICRO PROCESSOR CONTROL LINE】


PG081A RGB & INPUT
PG084A H & V DEF
PG081A RGB & INPUT
PG082B VIDEO
PG081A RGB & INPUT
PG031B SW REG
HS (H SYNC)
VS (H SYNC)
H FREQ CONT
H SIZE
H POSI
H CENTER
H LIN
V FREQ
V SIZE
V POSI
V LIN 1~2
SIDE PIN
ALIGNMENT
ROTATION
KINE BIAS
NORMAL/UNDER
H LIN CONT 1~5
HV CONT
V D FOCUS
H D FOCUS
AUDIO VOLUME
AUDIO MUTE
CONTRAST
BRIGHTNESS
RGB GAIN
RGB BIAS
RGB SIG ON/OFF
OSD GAIN
FACTORY CONT
COLOR
TINT
H APT
V APT
NTSC/PAL
H/V POL
H/V STATE
RGB/VIDEO
RGB 1/2, VIDEO 1/2
OSD CONT
PLL CS
OSD CS
CLK
DATA
EXT CONT ON/OFF
REMOCON ON/OFF
POWER MAN ON/OFF
P ON MODE 1~3
POWER MAN 1~2
POWER SENSE
DEGAUSS
FAN SENSE
+15V
+ 5V
2
5
3
3
3
2
2
3
2
DAC IC18
DAC IC20
DAC IC19
DAC IC26
H CONT IC22
PIT IC12
LED
2
CS
PIO IC17
PIO IC15
PIO IC16
MPU IC1
EP ROM IC4
RAM IC5
EEP ROM IC6
PIT IC11
RESET IC2
CONTROL KEY
EXTERNAL CONTROL
REMOTE CONTROL
PG026B CPU

BLOCK DIAGRAM


[POWER SUPPLY LINE]
PG031B
SW REG
AC IN
F1
LINE FILTER
PG089A
LINE FILTER
LINE FILTER
POSITVE THERMISTOR
DEGAUSS COIL
RECT
100/120V
220/240V
VOLTAGE SWITCH PLUG
PG098B AC RESET
PROTECTOR
PHOTO COUPLER
AC INPUT SENSE MOMENTARY STOP PROTECTOR IC1, Q1
STARTER
PG042B SW REG CONTROL
SWITCHING OSC ON/OFF CTL VOLTAGE & CURRENT PROTECTOR IC1, Q1~Q4
RECT
SWITCHING OUTPUT Q3
SWITCHING TRANS T1
SWITCHING OUTPUT Q4, Q5
SWITCHING TRANS T2
F2
F3
F4
RECT
+15V REG IC1
+15V REG IC2
+15V REG IC3
+6.3V REG IC4
+15V REG IC5
+5V REG IC6
HEATER CTL Q10
+28V REG IC5
DEGAUSS CTL Q9
RELAY RL1
VOLTAGE FEED BACK
PHOTO COUPLER PCD1
PHOTO COUPLER PCD4
PHOTO COUPLER PCD2
PHOTO COUPLER PCD3
PMC 1
PMC 2
POWER SENSE
DEGAUSS
PG026B CPU
+B1
+B2
+B3
+B4
+B5B
+B5C
+B6
+B7A
+B7B
+24V 0.63A (FAN)
+ 15V 0.35A
+ 5V 1.0A
PG026B CPU
+ 24V 0.9A
+ 15V 0.1A
PG086A DF & AUDIO
+ 15V 0.4A
+ 5V 0.5A
PG082B VIDEO
+6.3V 0.7A
PG025A CRT SOCKET
+190V 0.25A
+ 15V 0.3A
+ 5V 0.1A
PG081A RGB & INPUT
+165V 1.0A
+ 28V 0.4A
+ 15V 0.5A
PG084A H & V DEF
+165V 0.5A
+ 15V 0.5A
PG085A HV & FOCUS
FAN SENSE
PG026B CPU
FAN SENSER
PG090 FAN SENSE
FAN SENSER
PG090 FAN SENSE
FAN X5

CONECTION DIAGRAM


PG081A
RGB & INPUT
PG082A
VIDEO
PG025A
CRT SOCKET
PD474A
CRT SUB
PG084A
H & V DEF
PG085A
HV & FOCUS
PG086A
DF & AUDIO
PG083A
H DEF
PG026B
CPU
PG031B
SW REG
PG090
FAN SENSE
(LEFT SIDE)
PG090
FAN SENSE
(RIGHT SIDE)
PG027A (3/3)
REMOTE
PG027A (1/3)
PHOTO DET
PG027A
(2/3)
POWER SW
EXTERNAL SPEAKERS
RGB 1 IN
RGB 1 OUT
EXT CONTROL IN
EXT CONTROL OUT
RS-232C
ROTATION COIL
DEGAUSS COIL
DY
FBT
V001
J1
(SW REG)
(DY BOTTOM)
(H DEF)
(DY TOP)

Caution

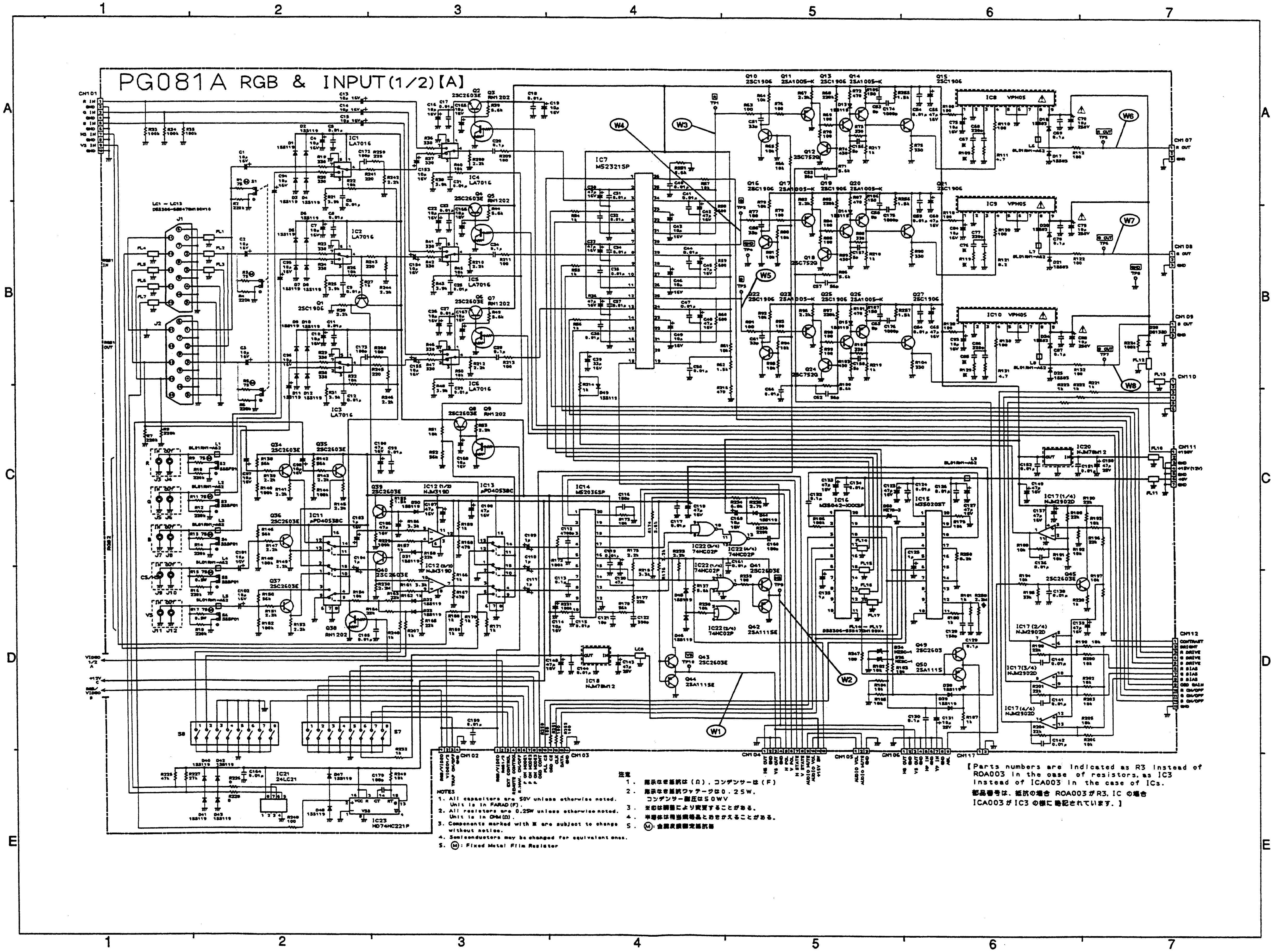
1. Components and units enclosed with ⚠ are critical components X-radiation safety.
2. When these have failed please replace only with the same type ones.

注　意

1. ⚠マークで囲んだ部品およびユニットはX線からの安全性に配慮すべき重要な部品です。
2. 故障した場合は、必ず同じ型のものと交換してください。

SCHEMATIC DIAGRAMS

RGB & INPUT PWB (PG081A) (1/2)

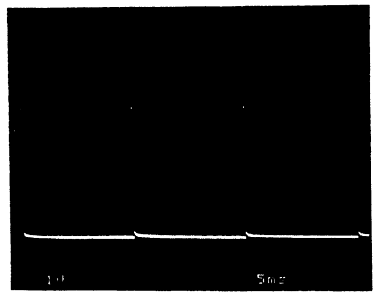

PG081A RGB & INPUT(1/2)[A]
1
2
3
4
5
6
7
A
B
C
D
E
CN101
CN102
CN103
CN104
CN105
CN106
CN107
CN108
CN109
CN110
CN111
CN112
CN117
IC7 M52321SP
IC8 VPH05
IC9 VPH05
IC10 VPH05
IC14 M52036SP
IC15 M35020ST
IC16 M35042-100SP
IC20 NJM78M12
IC18 NJM78M12
IC21 24LC21
IC23 HD74HC221P
W1
W2
W3
W4
W5
W6
W7
W8
S7
S8

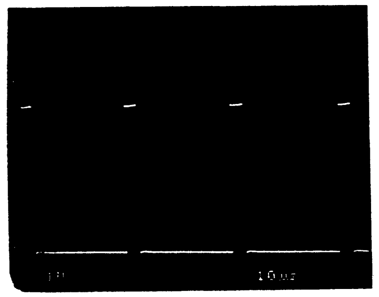
NOTES
1. All capacitors are 50V unless otherwise noted. Unit is in FARAD (F).
2. All resistors are 0.25W unless otherwise noted. Unit is in OHM (Ω).
3. Components marked with ※ are subject to change without notice.
4. Semiconductors may be changed for equivalent ones.
5. Ⓜ: Fixed Metal Film Resistor

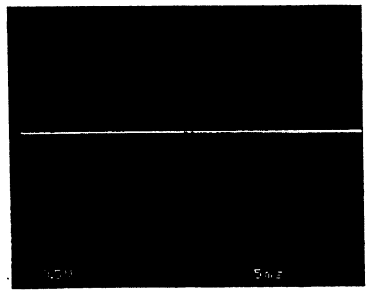
注意
1．指示なき抵抗は（Ω），コンデンサーは（F）
2．指示なき抵抗ワッテージは０．２５W，コンデンサー耐圧は５０WV
3．※印は調整により変更することがある。
4．半導体は相当規格品とおきかえることがある。
5．Ⓜ：金属皮膜固定抵抗器

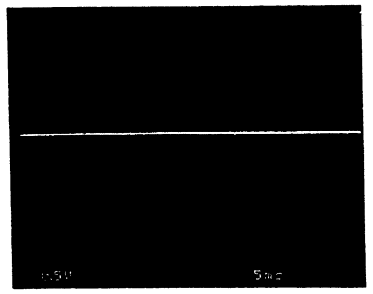
[Parts numbers are indicated as R3 instead of ROA003 in the case of resistors, as IC3 instead of ICA003 in the case of ICs.
部品番号は，抵抗の場合 ROA003がR3，ICの場合 ICA003がIC3の様に略記されています。]

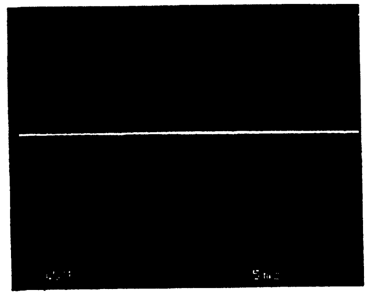
WAVE FORM

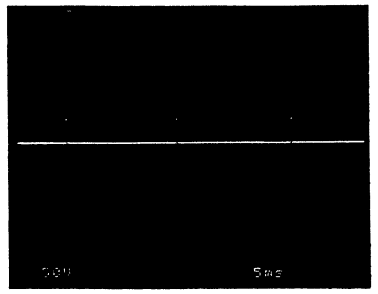

W1

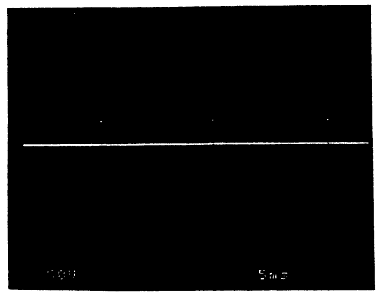

W2

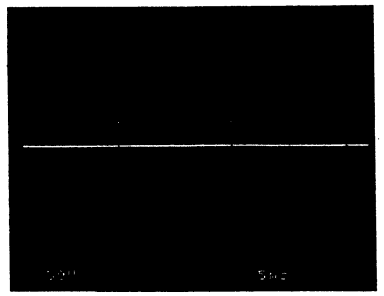

W3


W4


W5


W6


W7


W8

VOLTAGE

LOCATION	C	B	E
	D	G	S
Q 1	0.0	0.0	0.0
Q 2	12.0	11.8	11.1
Q 3	11.8	0.0	0.0
Q 4	12.0	11.8	11.1
Q 5	11.8	0.0	0.0
Q 6	12.0	11.8	11.1
Q 7	11.8	0.0	0.0
Q 8	12.0	0.0	0.0
Q 9	0.0	4.4	0.0
Q 10	12.0	0.0	0.0
Q 11	0.0	2.5	3.2
Q 12	3.1	-1.6	0.0
Q 13	10.3	4.2	2.5
Q 14	3.5	10.3	11.1
Q 15	12.0	3.5	2.9
Q 16	12.0	0.0	0.0
Q 17	0.0	2.5	3.1
Q 18	3.1	-1.6	0.0
Q 19	10.3	3.1	2.4
Q 20	3.4	10.3	11.1
Q 21	12.0	3.4	2.8
Q 22	12.0	0.0	0.0
Q 23	0.0	2.5	3.1
Q 24	3.1	-1.6	0.0
Q 25	10.3	3.1	2.4
Q 26	3.4	10.3	11.1
Q 27	12.0	3.4	2.8
Q 28	-	-	-
Q 29	-	-	-
Q 30	-	-	-
Q 31	-	-	-
Q 32	-	-	-
Q 33	-	-	-
Q 34	12.0	7.2	6.6
Q 35	12.0	7.2	6.6
Q 36	12.0	7.2	6.6
Q 37	12.0	7.2	6.6
Q 38	0.0	4.4	0.0
Q 39	12.0	5.7	5.2
Q 40	12.0	5.7	5.2
Q 41	5.1	0.4	0.3
Q 42	0.0	0.4	0.3
Q 43	5.1	0.2	0.7
Q 44	0.0	0.2	0.7
Q 45	3.9	0.0	0.0
Q 301	12.0	5.4	4.8
Q 302	12.0	5.4	4.8
Q 303	0.0	0.7	0.0
Q 304	0.0	0.0	0.0
Q 305	0.0	0.7	0.0
Q 306	0.0	0.0	0.0

CN101	VOLTAGE
1	0.0
2	0.0
3	0.0
4	0.0
5	0.0
6	0.0
7	2.9
8	0.0
9	3.0
10	0.0

CN102	VOLTAGE
1	4.4
2	4.4
3	4.2
4	0.0

CN103	VOLTAGE
1	4.4
2	4.4
3	3.4
4	0.0
5	3.4
6	3.3
7	3.4
8	3.3
9	0.0
10	4.6
11	4.7
12	4.6
13	4.7
14	0.0

CN104	VOLTAGE
1	0.3
2	0.0
3	0.7
4	0.0
5	0.0
6	3.7
7	0.0
8	3.7
9	0.0
10	3.0
11	15.0
12	4.7

CN105	VOLTAGE
1	3.0
2	0.0
3	0.0

CN106	VOLTAGE
1	0.3
2	0.0
3	0.7
4	0.0
5	0.0
6	0.0
7	0.9
8	0.0
9	0.0

CN107	VOLTAGE
1	129.0
2	0.0
3	0.0

CN108	VOLTAGE
1	132.0
2	0.0
3	0.0

CN109	VOLTAGE
1	134.0
2	0.0
3	0.0

CN110	VOLTAGE
1	193.4
2	0.0
3	7.1
4	5.8
5	3.6
6	0.0

CN111	VOLTAGE
1	190.0
2	0.0
3	0.0
4	15.0
5	0.0
6	5.0
7	0.0

CN112	VOLTAGE
1	4.2
2	3.5
3	2.7
4	2.5
5	2.6
6	4.0
7	3.0
8	2.4
9	1.8
10	0.0
11	0.0
12	0.0
13	0.0

CN113	VOLTAGE
1	5.8
2	0.0
3	5.8
4	0.0
5	5.8
6	0.0
7	0.0
8	0.0
9	2.9

CN114	VOLTAGE
1	4.8
2	0.0
3	4.8
4	0.0
5	0.0
6	0.0
7	0.0
8	0.0

CN115	VOLTAGE
1	0.0
2	0.0
3	0.0
4	0.0

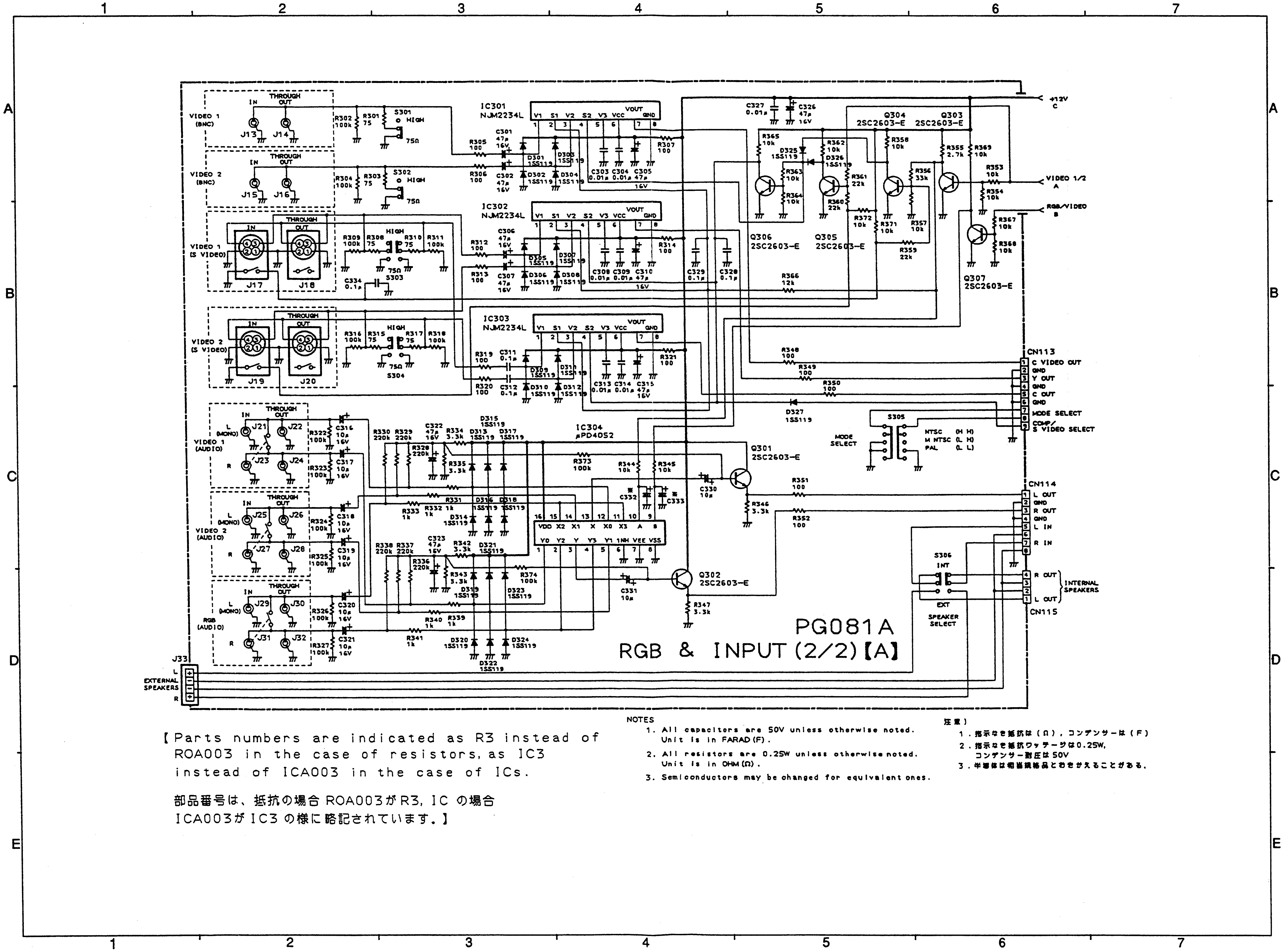
CN117	VOLTAGE
1	0.0
2	0.0

J1	VOLTAGE
1	0.0
2	0.0
3	0.0
4	0.0
5	0.0
6	0.0
7	0.0
8	0.0
9	0.0
10	0.0
11	0.0
12	5.0
13	0.0
14	0.0
15	5.0

J2	VOLTAGE
1	0.0
2	0.0
3	0.0
4	0.0
5	0.0
6	0.0
7	0.0
8	0.0
9	0.0
10	0.0
11	0.0
12	0.0
13	0.0
14	0.0
15	0.0

J33	VOLTAGE
1	0.0
2	0.0
3	0.0
4	0.0

RGB & INPUT PWB (PG081A) (2/2)


1
2
3
4
5
6
7
A
B
C
D
E
VIDEO 1 (BNC)
VIDEO 2 (BNC)
VIDEO 1 (S VIDEO)
VIDEO 2 (S VIDEO)
VIDEO 1 (AUDIO)
VIDEO 2 (AUDIO)
RGB (AUDIO)
IN
THROUGH OUT
J13
J14
J15
J16
J17
J18
J19
J20
J21
J22
J23
J24
J25
J26
J27
J28
J29
J30
J31
J32
J33
EXTERNAL SPEAKERS
L (MONO)
R
S301
S302
S303
S304
HIGH
75Ω
IC301 NJM2234L
IC302 NJM2234L
IC303 NJM2234L
V1 S1 V2 S2 V3 VCC VOUT GND
IC304 μPD4052
VDD X2 X1 X X0 X3 A B
Y0 Y2 Y Y3 Y1 INH VEE VSS
Q301 2SC2603-E
Q302 2SC2603-E
Q303 2SC2603-E
Q304 2SC2603-E
Q305 2SC2603-E
Q306 2SC2603-E
Q307 2SC2603-E
1SS119
+12V C
VIDEO 1/2 A
RGB/VIDEO B
CN113
C VIDEO OUT
GND
Y OUT
GND
C OUT
GND
MODE SELECT
COMP/S VIDEO SELECT
S305
MODE SELECT
NTSC (H H)
M NTSC (L H)
PAL (L L)
CN114
L OUT
GND
R OUT
GND
L IN
R IN
S306
INT
EXT
SPEAKER SELECT
R OUT
L OUT
INTERNAL SPEAKERS
CN115
PG081A
RGB & INPUT (2/2)【A】

NOTES
1. All capacitors are 50V unless otherwise noted.
Unit is in FARAD (F).
2. All resistors are 0.25W unless otherwise noted.
Unit is in OHM (Ω).
3. Semiconductors may be changed for equivalent ones.

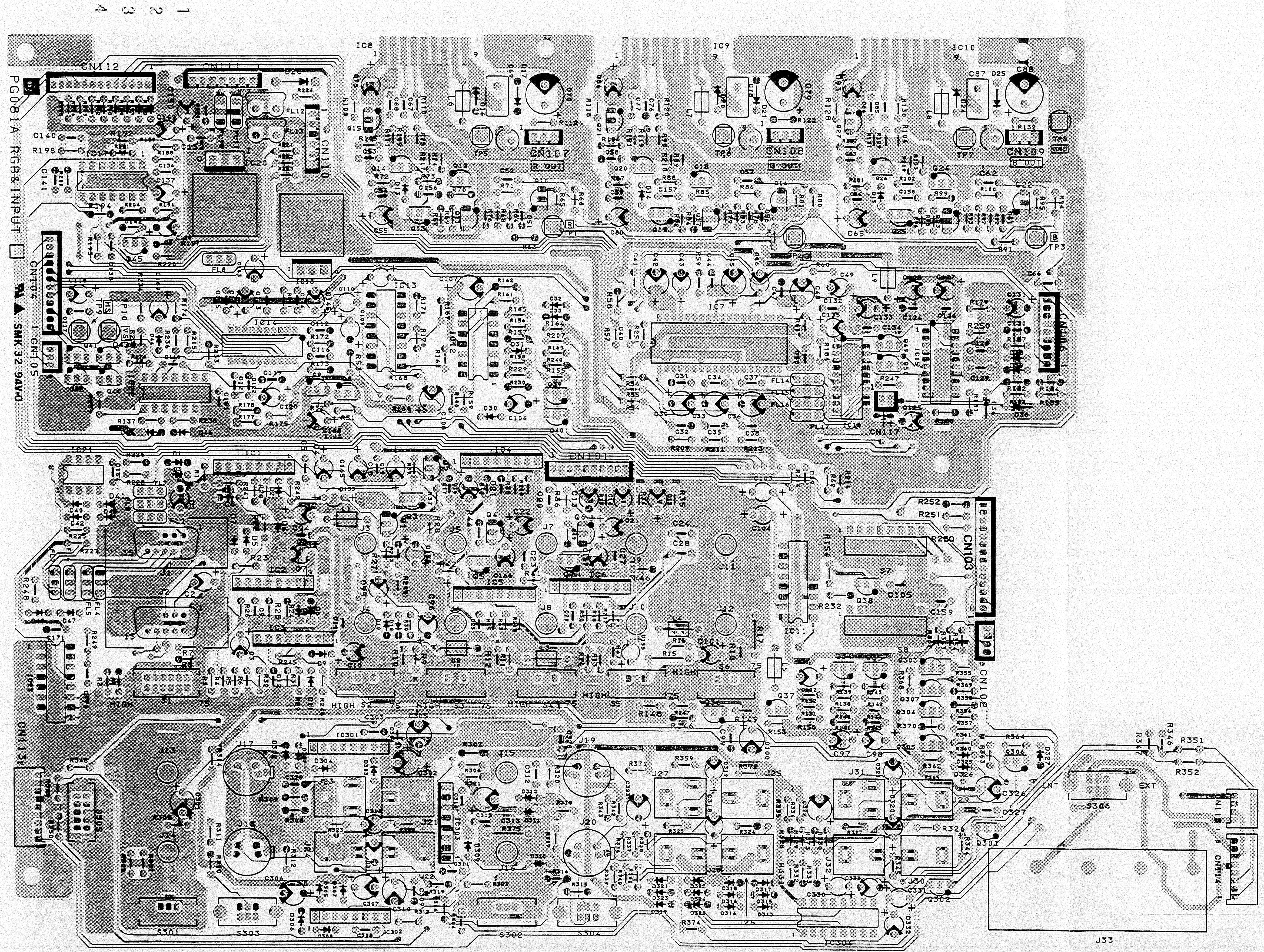
注意）
1．指示なき抵抗は（Ω），コンデンサーは（F）
2．指示なき抵抗ワッテージは0.25W,
コンデンサー耐圧は50V
3．半導体は相当規格品とおきかえることがある。

【Parts numbers are indicated as R3 instead of ROA003 in the case of resistors, as IC3 instead of ICA003 in the case of ICs.

部品番号は、抵抗の場合 ROA003がR3, IC の場合 ICA003がIC3 の様に略記されています。】

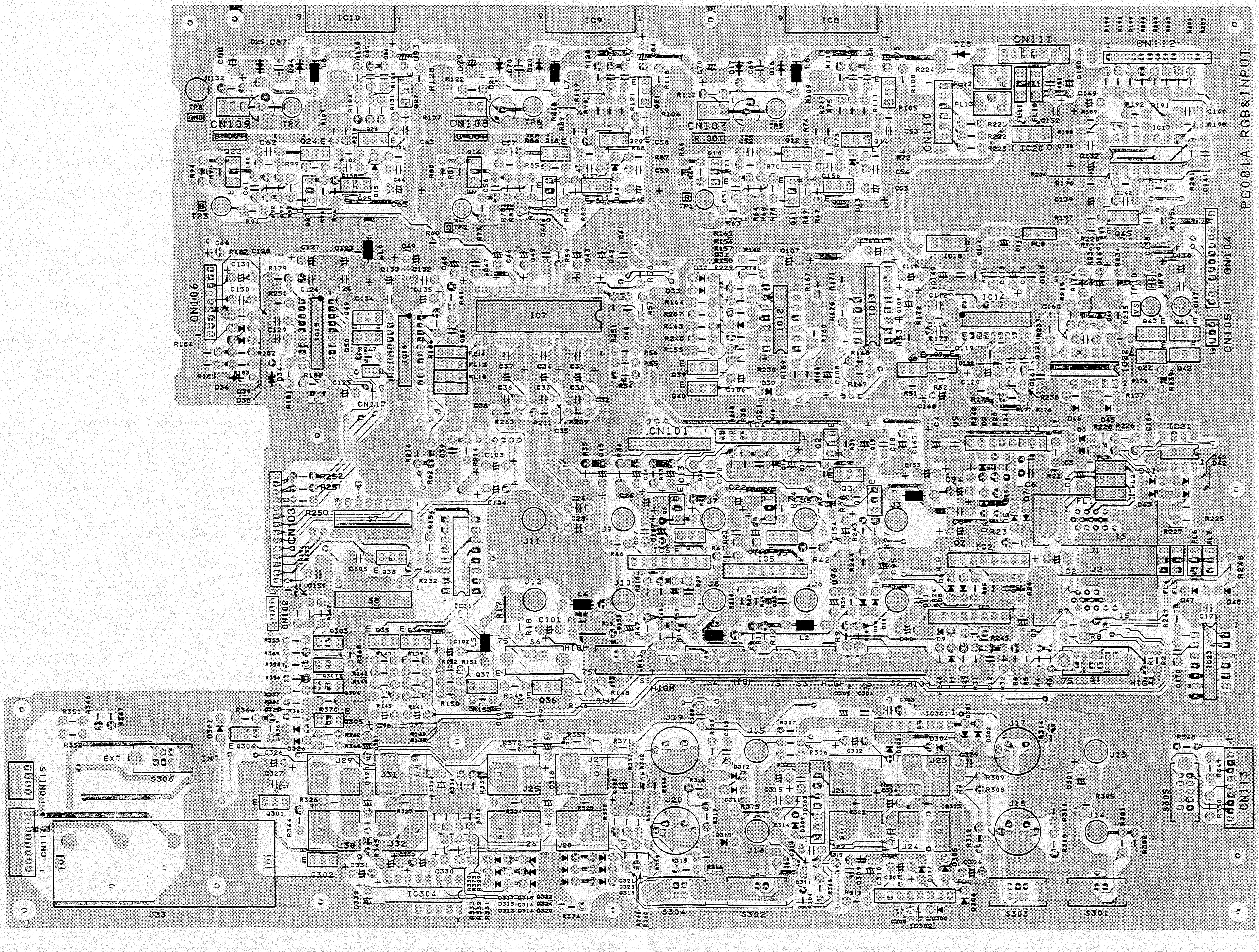
RGB & INPUT PWB (PG081A)

PARTS SIDE

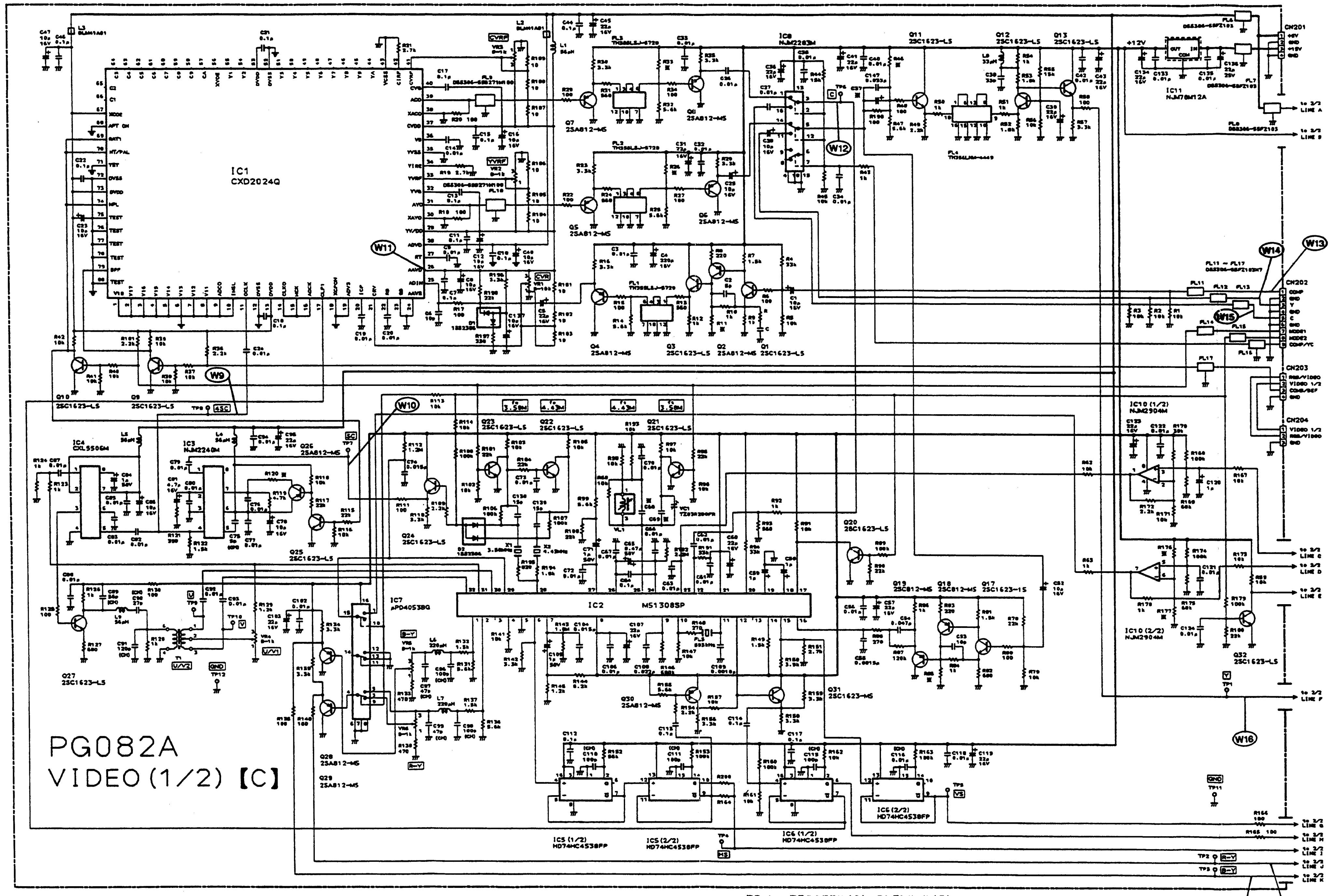

1
2
3
4
PG081A RGB&INPUT
CN112
CN111
CN110
CN104
CN105
IC8
IC9
IC10
CN107
R OUT
CN108
G OUT
CN109
B OUT
TP5
TP6
TP7
TP1
TP3
GND
IC7
IC12
IC13
CN116
CN117
CN101
CN103
CN102
IC1
IC2
IC3
IC5
IC6
IC11
IC301
IC302
IC303
IC304
S1
S2
S3
S4
S5
S6
S7
S8
S301
S302
S303
S304
S306
CN113
CN114
CN115
J1
J2
J3
J11
J12
J13
J17
J18
J19
J20
J33
INT
EXT
HIGH
75
SMK 32 94V-0

RGB & INPUT PWB (PG081A)

SOLDER SIDE


PG081A RGB&INPUT
IC10
IC9
IC8
IC7
CN109
CN108
CN107
CN110
CN111
CN112
CN104
CN105
CN106
CN101
CN102
CN103
CN113
CN114
CN115
J1
J2
J11
J12
J33
S306
S305
S304
S302
S303
S301
EXT
INT
HIGH
75

VIDEO PWB (PG082B) (1/2)


PG082A
VIDEO (1/2) 【C】
IC1 CXD2024Q
IC2 M51308SP
IC3 NJM2240M
IC4 CXL5506M
IC5 (1/2) HD74HC4538FP
IC5 (2/2) HD74HC4538FP
IC6 (1/2) HD74HC4538FP
IC6 (2/2) HD74HC4538FP
IC7 μPD4053BG
IC8 NJM2283M
IC10 (1/2) NJM2904M
IC10 (2/2) NJM2904M
IC11 NJM78M12A
CN201
CN202
CN203
CN204
W9
W10
W11
W12
W13
W14
W15
W16
W17
W18
to 2/2 LINE A
to 2/2 LINE B
to 2/2 LINE C
to 2/2 LINE D
to 2/2 LINE E
to 2/2 LINE F
to 2/2 LINE G
to 2/2 LINE H
to 2/2 LINE I
to 2/2 LINE J
to 2/2 LINE K

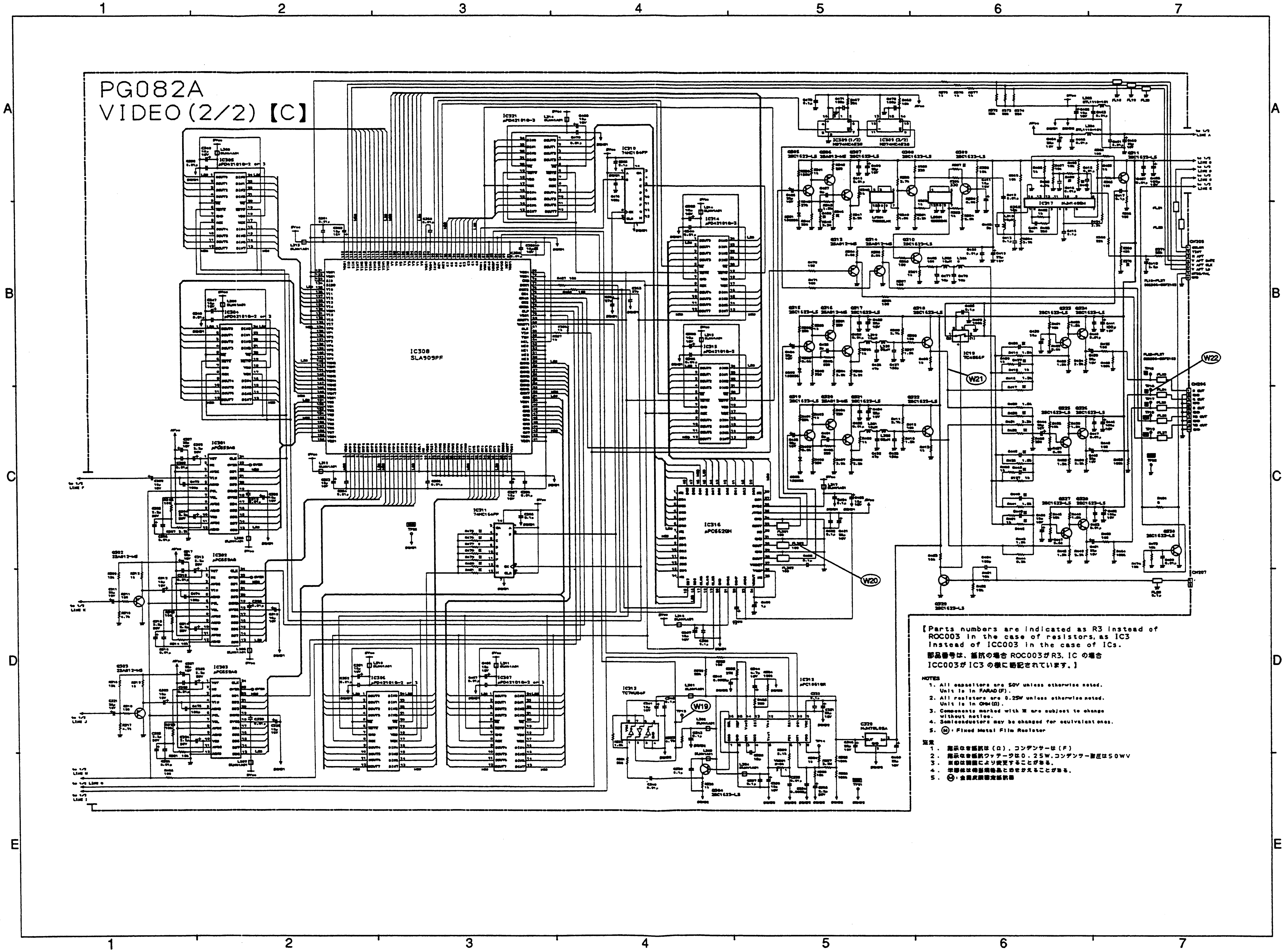
【Parts numbers are indicated as R3 instead of ROC003 in the case of resistors, as IC3 instead of ICC003 in the case of ICs.

部品番号は、抵抗の場合 ROC003がR3, IC の場合 ICC003がIC3 の様に略記されています。】

NOTES
1. All capacitors are 50V unless otherwise noted. Unit is in FARAD (F), noted. Unit is in OHM (Ω).
2. All resistors are 0.25W unless otherwise
3. Components marked with ※ are subject to change without notice.
4. Semiconductors may be changed for equivalent ones.

注意
1. 指示なき抵抗は（Ω）、コンデンサーは（F）
2. 指示なき抵抗ワッテージは０．２５W，コンデンサー耐圧は５０V
3. ※印は調整により変更することがある。
4. 半導体は相当規格品とおきかえることがある。

VIDEO PWB (PG082B) (2/2)

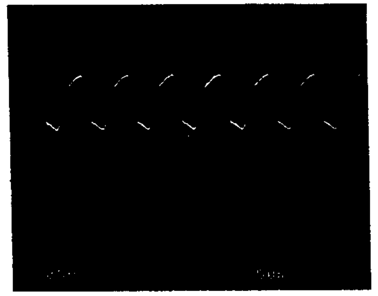

PG082A
VIDEO(2/2)【C】
IC308
SLA909PF
IC316
μPC662GH
IC311
74HC164FP
IC310
74HC164FP
IC317
NJM2499M
W19
W20
W21
W22
1
2
3
4
5
6
7
A
B
C
D
E

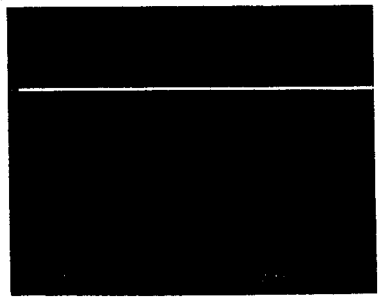
【Parts numbers are indicated as R3 instead of ROC003 in the case of resistors, as IC3 instead of ICC003 in the case of ICs.
部品番号は、抵抗の場合 ROC003がR3, IC の場合 ICC003がIC3 の様に略記されています。】

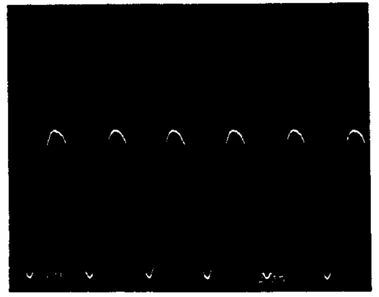
NOTES
1. All capacitors are 50V unless otherwise noted. Unit is in FARAD (F).
2. All resistors are 0.25W unless otherwise noted. Unit is in OHM (Ω).
3. Components marked with ※ are subject to change without notice.
4. Semiconductors may be changed for equivalent ones.
5. Ⓜ : Fixed Metal Film Resistor

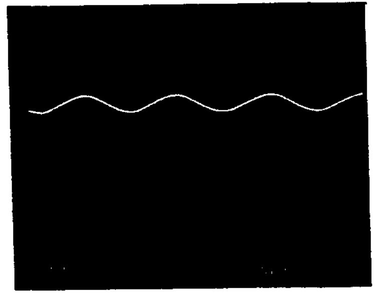
注意
1． 指示なき抵抗は（Ω），コンデンサーは（F）
2． 指示なき抵抗ワッテージは0．25W，コンデンサー耐圧は50WV
3． ※印は改良により変更することがある。
4． 半導体は相当規格品とおきかえることがある。
5． Ⓜ：金属皮膜固定抵抗器

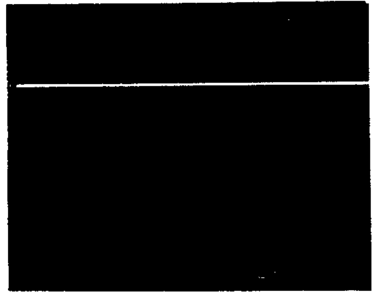
WAVE FORM

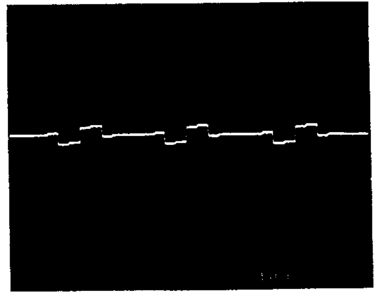

W9

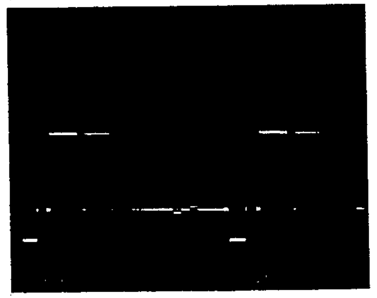

W14

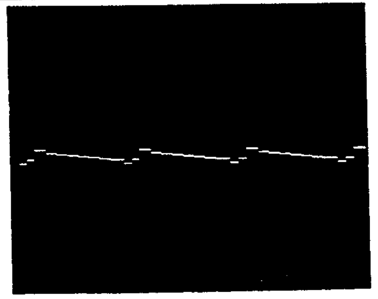

W19

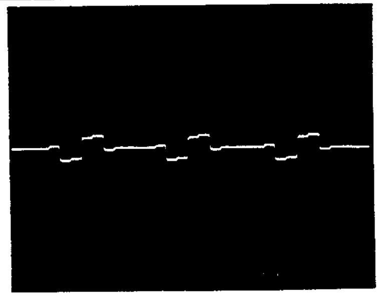

W10

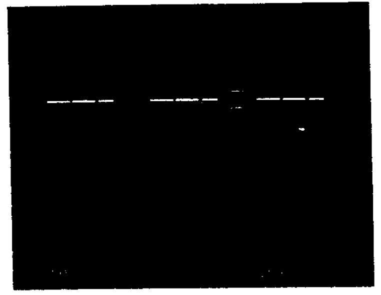

W15

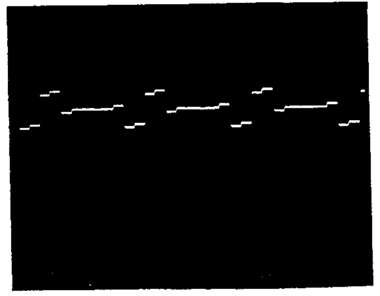

W20

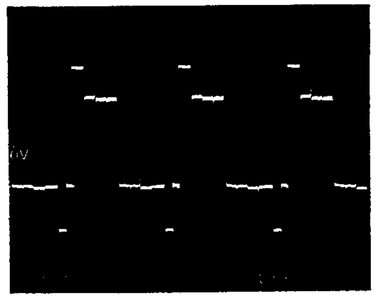

W11

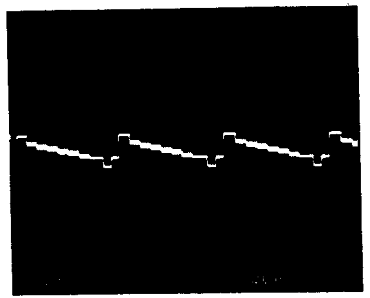

W16

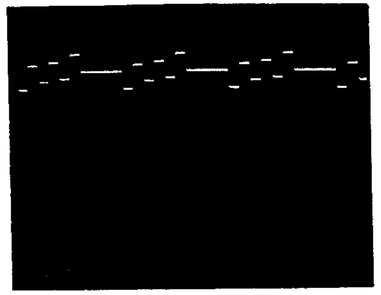

W21


W12


W17


W22


W13


W18

VOLTAGE

LOCATION	C D	B G	E S
Q 1	11.1	2.8	2.2
Q 2	3.7	11.1	11.7
Q 3	12.0	3.7	3.1
Q 4	0.0	2.8	3.4
Q 5	0.0	0.6	1.3
Q 6	0.0	1.2	1.8
Q 7	0.0	0.6	1.2
Q 8	0.0	1.1	1.8
Q 9	0.0	0.6	0.0
Q 10	0.0	0.6	0.0
Q 11	12.0	5.3	4.7
Q 12	8.4	4.8	4.1
Q 13	12.0	8.4	7.8
Q 14	-	-	-
Q 15	-	-	-
Q 16	-	-	-
Q 17	10.9	2.8	2.2
Q 18	4.6	10.9	11.5
Q 19	0.0	4.6	5.3
Q 20	10.0	0.0	0.0
Q 21	12.0	0.0	0.0
Q 22	0.0	0.7	0.0
Q 23	8.5	0.0	0.0
Q 24	12.0	5.8	5.3
Q 25	0.0	0.6	0.0
Q 26	4.9	4.3	4.9
Q 27	9.0	1.9	1.3
Q 28	0.0	2.5	3.2
Q 29	0.0	3.5	4.1
Q 30	2.3	13.0	12.0
Q 31	12.0	1.4	6.3
Q 32	4.4	0.0	0.0

LOCATION	C D	B G	E S
Q 301	-	0.0	0.0
Q 302	0.0	1.3	1.9
Q 303	0.0	1.2	1.9
Q 304	5.1	3.4	2.7
Q 305	10.7	2.1	12.5
Q 306	5.8	10.7	11.4
Q 307	12.0	5.8	5.2
Q 308	10.8	5.0	4.5
Q 309	10.1	4.9	4.2
Q 310	12.0	4.3	3.6
Q 311	12.0	9.2	8.5
Q 312	-	-	-
Q 313	0.0	4.8	3.1
Q 314	0.0	4.6	3.0
Q 315	10.0	2.8	2.2
Q 316	5.9	10.0	10.7
Q 317	12.0	5.9	5.3
Q 318	12.0	4.8	4.1
Q 319	10.0	2.8	2.2
Q 320	5.9	10.0	10.7
Q 321	12.0	5.9	5.3
Q 322	12.0	4.8	4.2
Q 323	8.9	4.3	3.6
Q 324	12.0	8.9	8.2
Q 325	8.3	4.3	3.7
Q 326	12.0	8.3	7.7
Q 327	9.1	4.3	3.7
Q 328	12.0	9.1	8.4
Q 329	12.0	0.0	0.0
Q 330	-	-	-

CN201	VOLTAGE
1	5.0
2	15.0
3	0.0

CN202	VOLTAGE
1	5.8
2	0.0
3	5.8
4	0.0
5	5.8
6	0.0
7	0.0
8	0.0
9	2.9

CN203	VOLTAGE
1	4.4
2	4.4
3	4.2
4	0.0

CN205	VOLTAGE
1	4.2
2	2.2
3	2.5
4	4.6
5	4.6
6	4.6
7	4.4
8	0.0

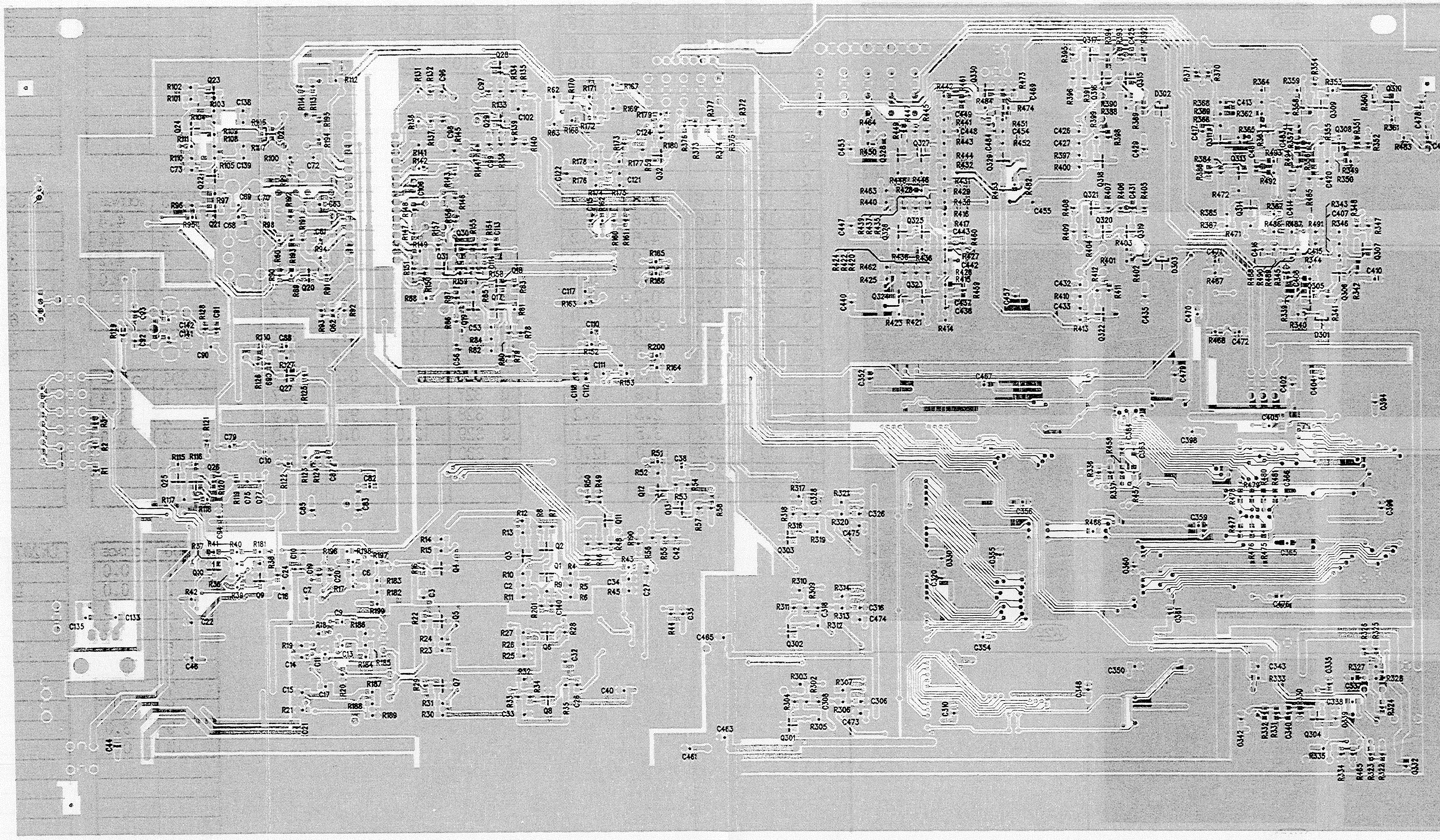
CN204	VOLTAGE
1	4.4
2	4.4
3	0.0

CN206	VOLTAGE
1	0.0
2	0.0
3	0.0
4	0.0
5	0.0
6	0.0
7	2.9
8	0.0
9	3.0
10	0.0

CN207	VOLTAGE
1	0.0
2	0.0

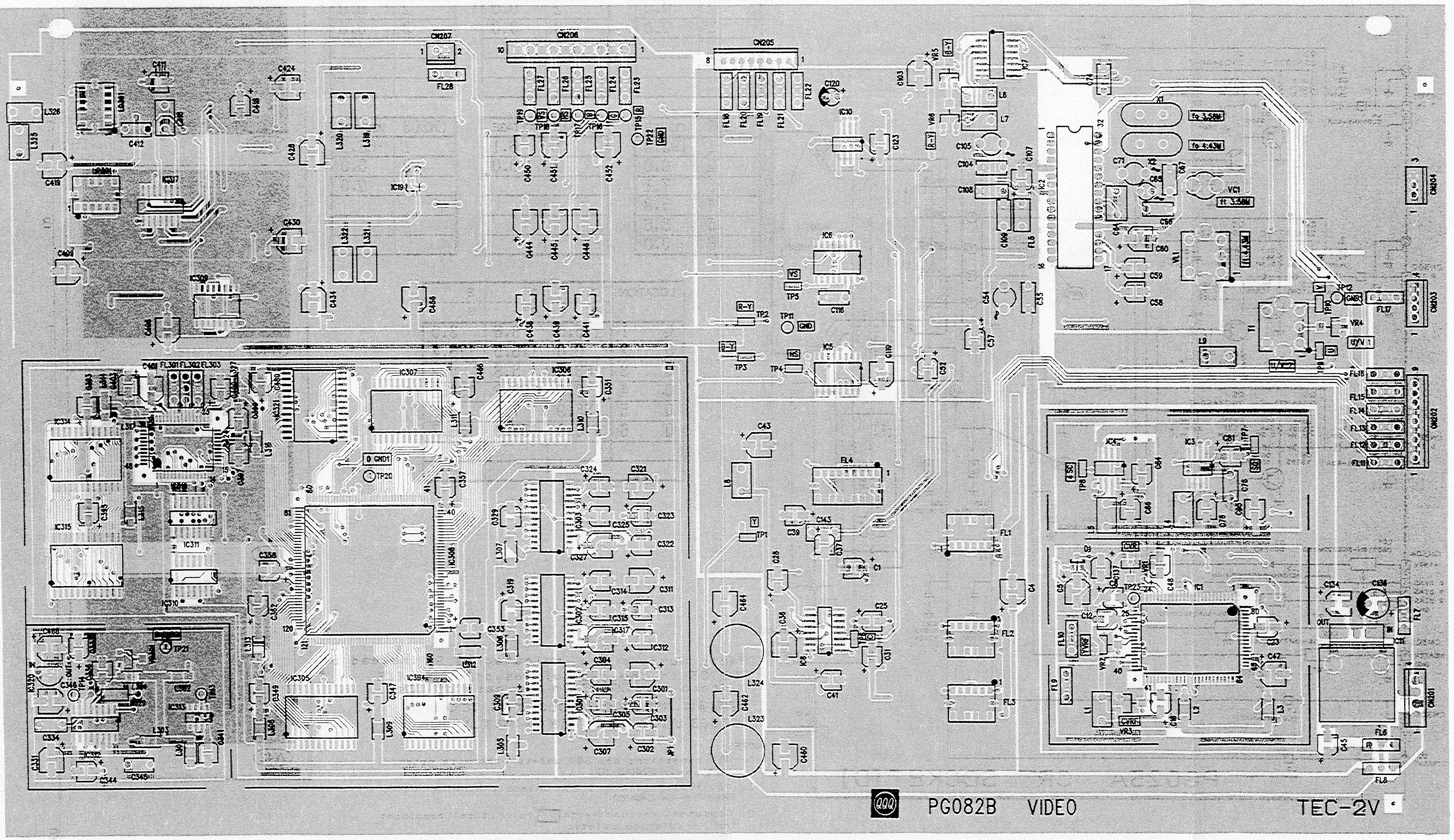
VIDEO PWB (PG082B)

PARTS SIDE

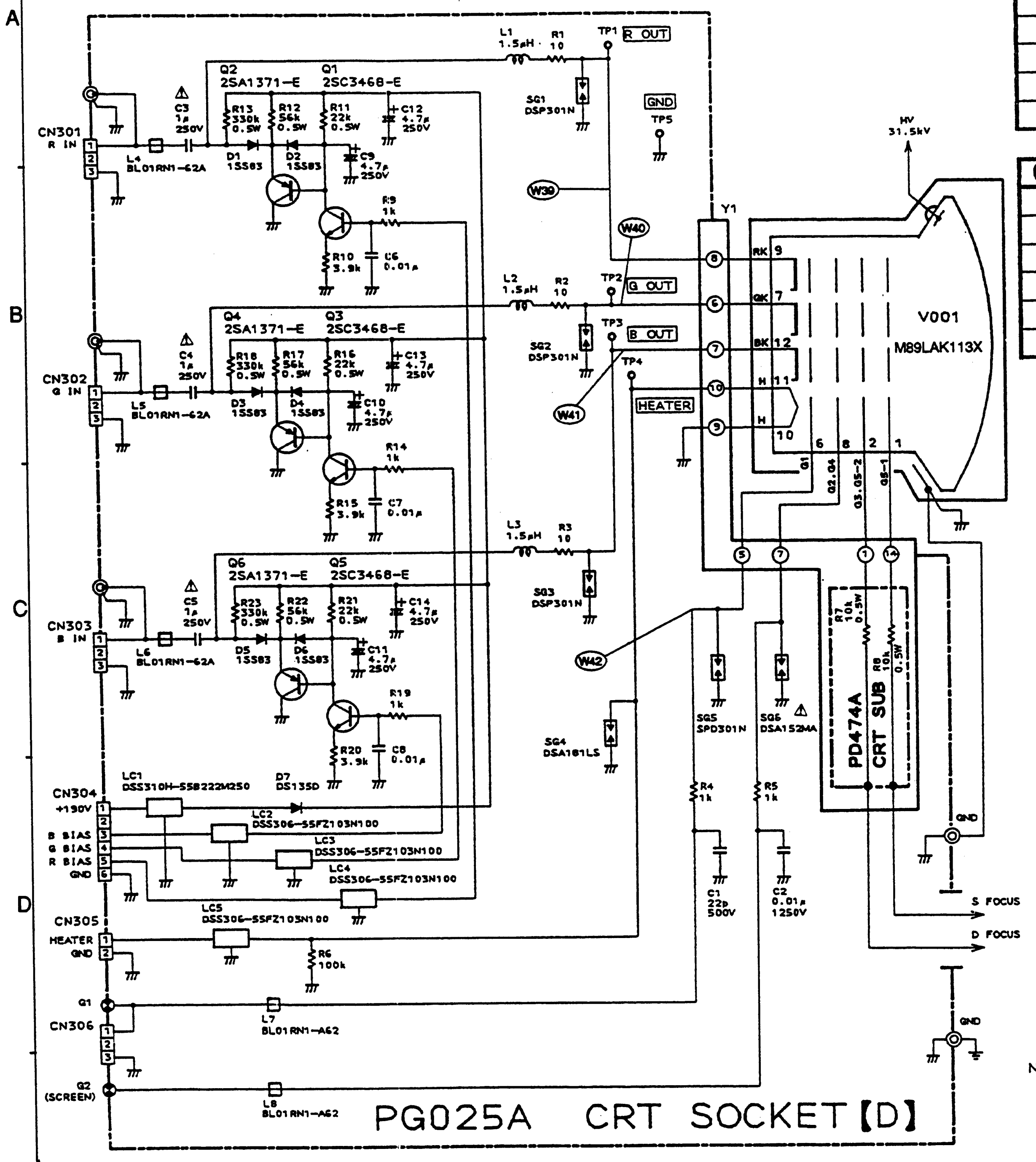


VIDEO PWB (PG082B)

SOLDER SIDE


PG082B VIDEO
TEC-2V
CN207
CN206
CN205
CN204
CN203
CN202
CN201
IC307
IC306
IC308
IC305
IC304
IC1
IC2
IC3
IC4
IC5
IC6
IC10

CRT SOCKET PWB (PG025A)


CN301
R IN
L4
BL01RN1-62A
C3
1μ
250V
D1
1SS83
D2
1SS83
Q2
2SA1371-E
Q1
2SC3468-E
R13
330k
0.5W
R12
56k
0.5W
R11
22k
0.5W
C12
4.7μ
250V
C9
4.7μ
250V
R9
1k
R10
3.9k
C6
0.01μ
L1
1.5μH
R1
10
TP1
R OUT
SG1
DSP301N
GND
TP5
W39
W40
CN302
G IN
L5
BL01RN1-62A
C4
1μ
250V
D3
1SS83
D4
1SS83
Q4
2SA1371-E
Q3
2SC3468-E
R18
330k
0.5W
R17
56k
0.5W
R16
22k
0.5W
C13
4.7μ
250V
C10
4.7μ
250V
R14
1k
R15
3.9k
C7
0.01μ
L2
1.5μH
R2
10
TP2
G OUT
TP3
B OUT
SG2
DSP301N
TP4
HEATER
W41
CN303
B IN
L6
BL01RN1-62A
C5
1μ
250V
D5
1SS83
D6
1SS83
Q6
2SA1371-E
Q5
2SC3468-E
R23
330k
0.5W
R22
56k
0.5W
R21
22k
0.5W
C14
4.7μ
250V
C11
4.7μ
250V
R19
1k
R20
3.9k
C8
0.01μ
L3
1.5μH
R3
10
SG3
DSP301N
W42
SG4
DSA181LS
CN304
+190V
B BIAS
G BIAS
R BIAS
GND
LC1
DSS310H-55B222M250
D7
DS135D
LC2
DSS306-55FZ103N100
LC3
DSS306-55FZ103N100
LC4
DSS306-55FZ103N100
CN305
HEATER
GND
LC5
DSS306-55FZ103N100
R6
100k
G1
CN306
L7
BL01RN1-A62
G2
(SCREEN)
L8
BL01RN1-A62
Y1
RK
GK
BK
H
H
HV
31.5kV
V001
M89LAK113X
G1
G2.G4
G3.G5-2
G5-1
SG5
SPD301N
SG6
DSA152MA
R4
1k
R5
1k
C1
22p
500V
C2
0.01μ
1250V
R7
10k
0.5W
R8
10k
0.5W
PD474A
CRT SUB
GND
S FOCUS
D FOCUS
GND
PG025A CRT SOCKET【D】

VOLTAGE

CN301	VOLTAGE
1	129.0
2	0.0
3	0.0

CN302	VOLTAGE
1	131.0
2	0.0
3	0.0

CN303	VOLTAGE
1	133.4
2	0.0
3	0.0

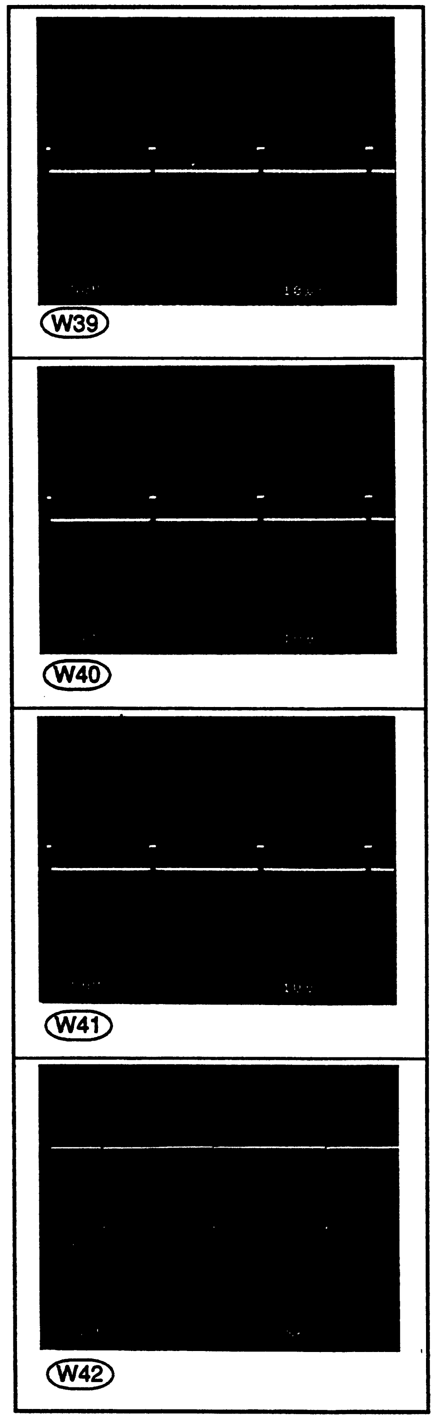
CN304	VOLTAGE
1	193.4
2	0.0
3	7.1
4	5.8
5	3.6
6	0.0

CN305	VOLTAGE
1	6.1
2	0.0

CN306	VOLTAGE
1	-68.6
2	0.0
3	0.0

LOCATION	C	B	E
	D	G	S
Q 1	175.5	3.6	3.0
Q 2	0.0	175.5	176.4
Q 3	163.2	5.8	5.2
Q 4	0.0	163.2	164.1
Q 5	155.9	7.1	6.5
Q 6	0.0	155.9	156.7

WAVE FORM



【Parts numbers are indicated as R3 instead of ROD003 in the case of resistors, as IC3 instead of ICD003 in the case of ICs.

部品番号は、抵抗の場合　ROD003がR3, ICの場合 ICD003 がIC3 の様に略記されています.】

NOTES

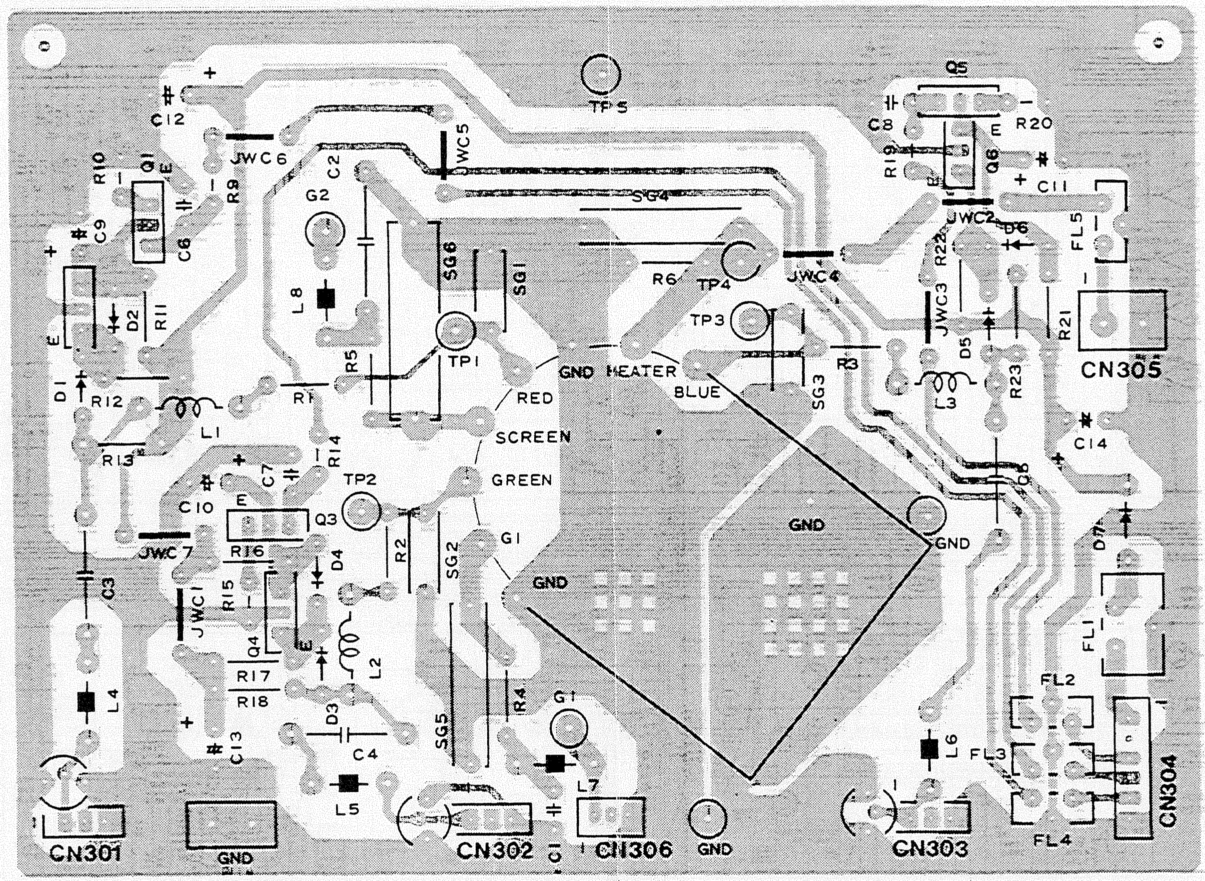
1. All capacitors are 50V unless otherwise noted. Unit is in FARAD (F).
2. All resistors are 0.25W unless otherwise noted. Unit is in OHM (Ω).
3. Component enclosed with ☐ is critical component for X-radiation safety.
   When replacing this, replace with the identical one.

注意

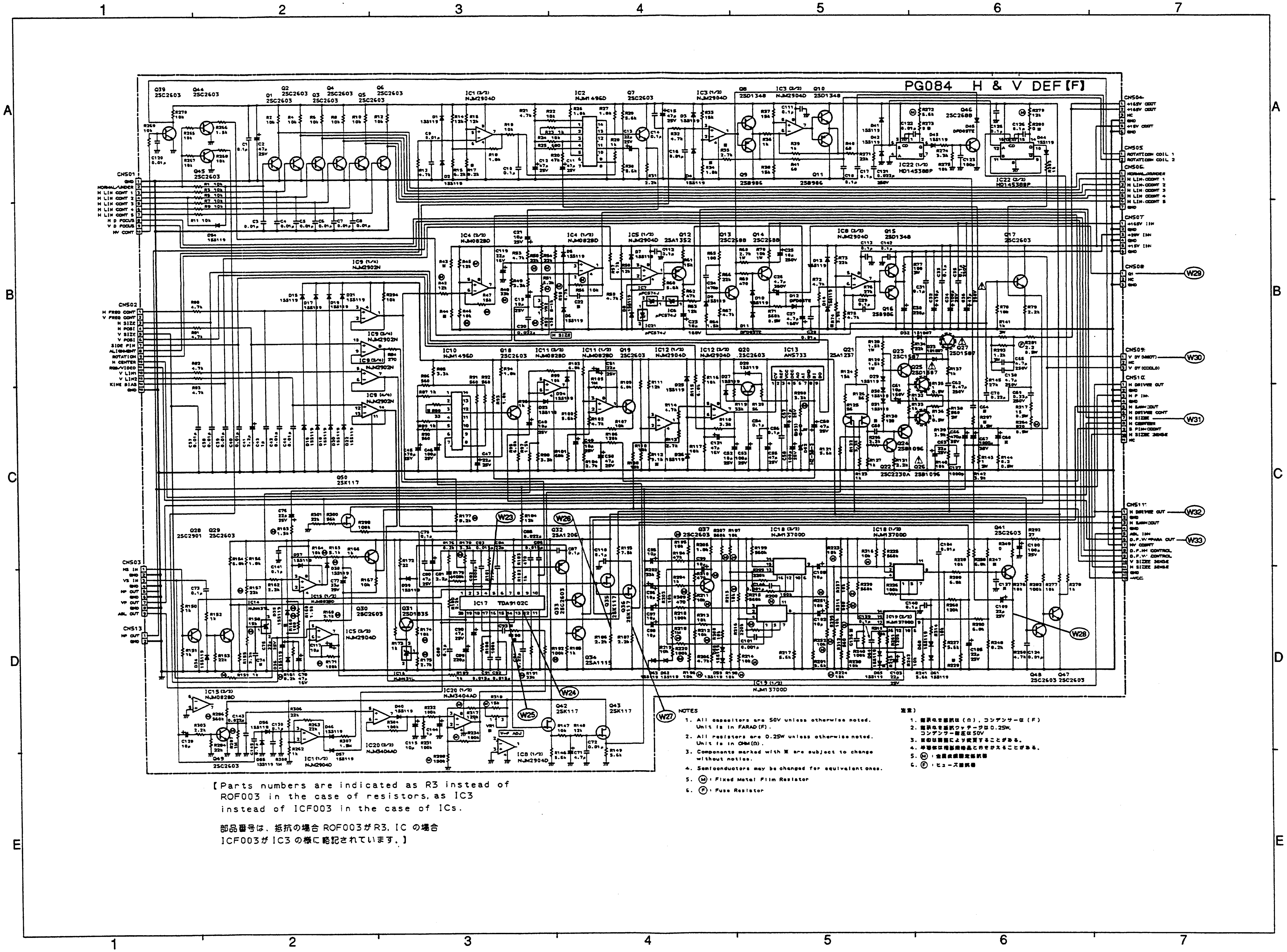
1．指示なき抵抗は（Ω），コンデンサーは（F）
2．指示なき抵抗ワッテージは０．２５W，コンデンサー耐圧は５０V
3．☐で囲まれた部品は接着剤で固定されています。
　これらの部品がこわれたら、資格のあるサービスマンに修理を依頼して下さい。

CRT SOCKET PWB (PG025A)

SOLDER SIDE


TP5
Q5
C8
R20
R19
Q6
C11
JWC2
D6
FL5
R22
C12
JWC6
JWC5
R10
Q1
R9
C2
G2
SG4
C9
C6
SG6
SG1
R6
TP4
JWC4
TP3
JWC3
D5
R21
CN305
D2
R11
L8
R5
TP1
GND
HEATER
BLUE
SG3
R3
L3
R23
D1
R12
L1
R1
RED
SCREEN
C14
R13
R14
C7
TP2
GREEN
C10
Q3
GND
D7
JWC7
R16
D4
R2
SG2
G1
GND
C3
JWC1
R15
Q4
L2
FL1
R17
R18
FL2
L4
D3
C4
SG5
R4
G1
L6
FL3
C13
L5
L7
CN304
CN301
GND
CN302
C1
CN306
GND
CN303
FL4

H & V DEF PWB (PG084A)


PG084 H & V DEF [F]
1
2
3
4
5
6
7
A
B
C
D
E
CN501
CN502
CN503
CN513
CN504
CN505
CN506
CN507
CN508
CN509
CN510
CN511
IC17 TDA9102C
W23
W24
W25
W26
W27
W28
W29
W30
W31
W32
W33

NOTES

1. All capacitors are 50V unless otherwise noted.
   Unit is in FARAD (F).
2. All resistors are 0.25W unless otherwise noted.
   Unit is in OHM (Ω).
3. Components marked with ※ are subject to change without notice.
4. Semiconductors may be changed for equivalent ones.
5. Ⓜ : Fixed Metal Film Resistor
6. Ⓕ : Fuse Resistor

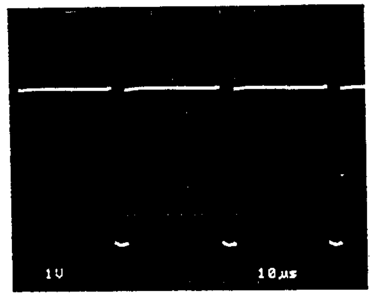
注意)

1. 指示なき抵抗は（Ω），コンデンサーは（F）
2. 指示なき抵抗ワッテージは0.25W,
   コンデンサー耐圧は50V
3. ※印は製造により変更することがある。
4. 半導体は相当品とおきかえることがある。
5. Ⓜ：金属皮膜固定抵抗器
6. Ⓕ：ヒューズ抵抗器

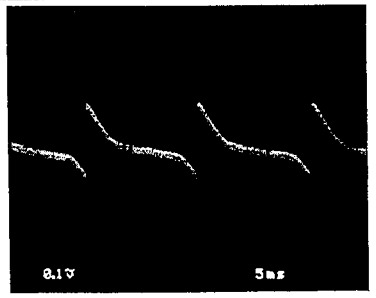
[Parts numbers are indicated as R3 instead of ROF003 in the case of resistors, as IC3 instead of ICF003 in the case of ICs.

部品番号は、抵抗の場合 ROF003がR3, IC の場合 ICF003が IC3 の様に略記されています。]

WAVE FORM

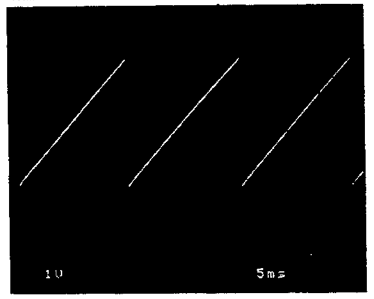


W23

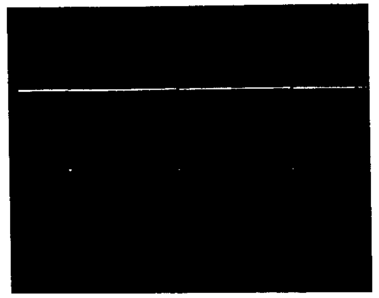


W28

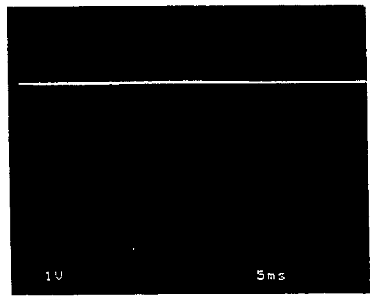
W33



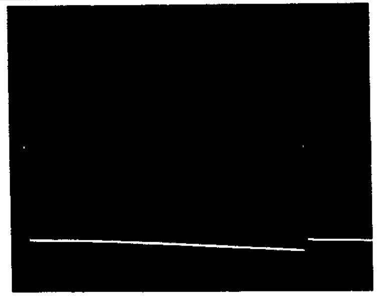
W24



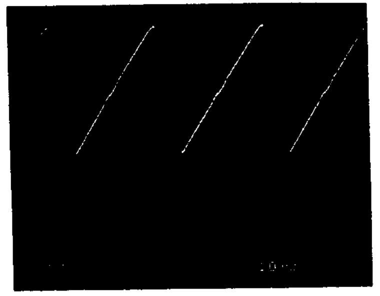
W29



W25

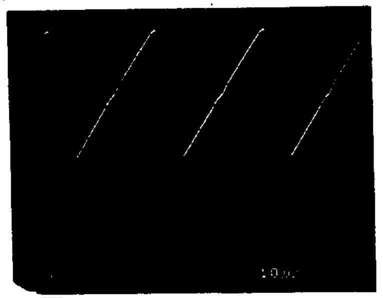


W30

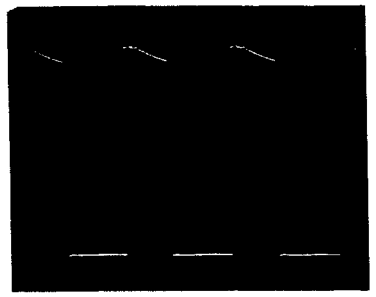


W26

W31



W27



W32

VOLTAGE

LOCATION	C	B	E
	D	G	S
Q 1	14.9	0.0	0.0
Q 2	14.9	0.0	0.0
Q 3	0.0	0.7	0.0
Q 4	14.9	0.0	0.0
Q 5	0.0	0.7	0.0
Q 6	0.0	0.7	0.0
Q 7	15.0	10.6	10.0
Q 8	15.0	4.6	5.2
Q 9	0.0	4.6	5.2
Q 10	15.0	10.3	9.7
Q 11	0.0	10.3	9.7
Q 12	-59.3	4.7	5.3
Q 13	110.0	-0.1	0.0
Q 14	120.4	110.0	109.7
Q 15	28.0	7.6	8.2
Q 16	0.0	7.6	8.2
Q 17	15.0	-1.1	0.9
Q 18	15.0	9.8	9.1
Q 19	15.0	6.2	5.7
Q 20	15.0	13.4	12.8
Q 21	0.0	3.4	4.1
Q 22	14.3	0.6	0.0
Q 23	28.6	16.6	16.1
Q 24	0.0	14.3	14.6
Q 25	28.6	16.1	15.7
Q 26	0.0	14.6	15.0
Q 27	139.1	28.4	28.6
Q 28	4.4	0.0	0.0
Q 29	4.8	0.0	0.0
Q 30	15.0	8.6	8.0
Q 31	13.9	12.4	11.8
Q 32	13.2	4.9	11.8
Q 33	15.0	13.2	4.7
Q 34	0.0	13.2	4.7
Q 35	15.0	4.4	4.6
Q 36	15.0	4.4	4.5
Q 37	13.5	3.4	2.7
Q 38	-	-	-
Q 39	0.0	0.7	0.0
Q 40	15.0	0.2	0.0
Q 41	14.6	4.3	3.7
Q 42	3.8	4.0	14.9
Q 43	0.0	4.5	15.0
Q 44	0.3	0.0	0.0
Q 45	8.2	0.0	0.0
Q 46	118.3	0.0	0.0
Q 47	14.9	0.0	0.0
Q 48	0.0	0.7	0.0
Q 49	5.6	-1.8	0.0
Q 50	3.5	4.0	3.3

CN501	VOLTAGE
1	0.0
2	0.0
3	0.0
4	4.6
5	0.0
6	4.6
7	4.5
8	4.5
9	5.0
10	4.9

CN502	VOLTAGE
1	8.9
2	0.0
3	4.1
4	1.9
5	5.3
6	3.5
7	3.7
8	3.2
9	2.9
10	3.9
11	4.4
12	3.3
13	3.3
14	3.3
15	0.0

CN503	VOLTAGE
1	0.3
2	0.0
3	0.7
4	0.0
5	0.0
6	0.0
7	0.9
8	0.0
9	0.0

CN504	VOLTAGE
1	165.0
2	165.0
3	0.0
4	0.0
5	15.0
6	0.0

CN505	VOLTAGE
1	8.3
2	6.5

CN506	VOLTAGE
1	14.9
2	14.9
3	0.0
4	14.9
5	0.0
6	0.0
7	0.0

CN507	VOLTAGE
1	165.0
2	0.0
3	28.0
4	0.0
5	15.0
6	0.0

CN508	VOLTAGE
1	-68.6
2	0.0
3	0.0

CN509	VOLTAGE
1	15.4
2	0.0
3	14.9

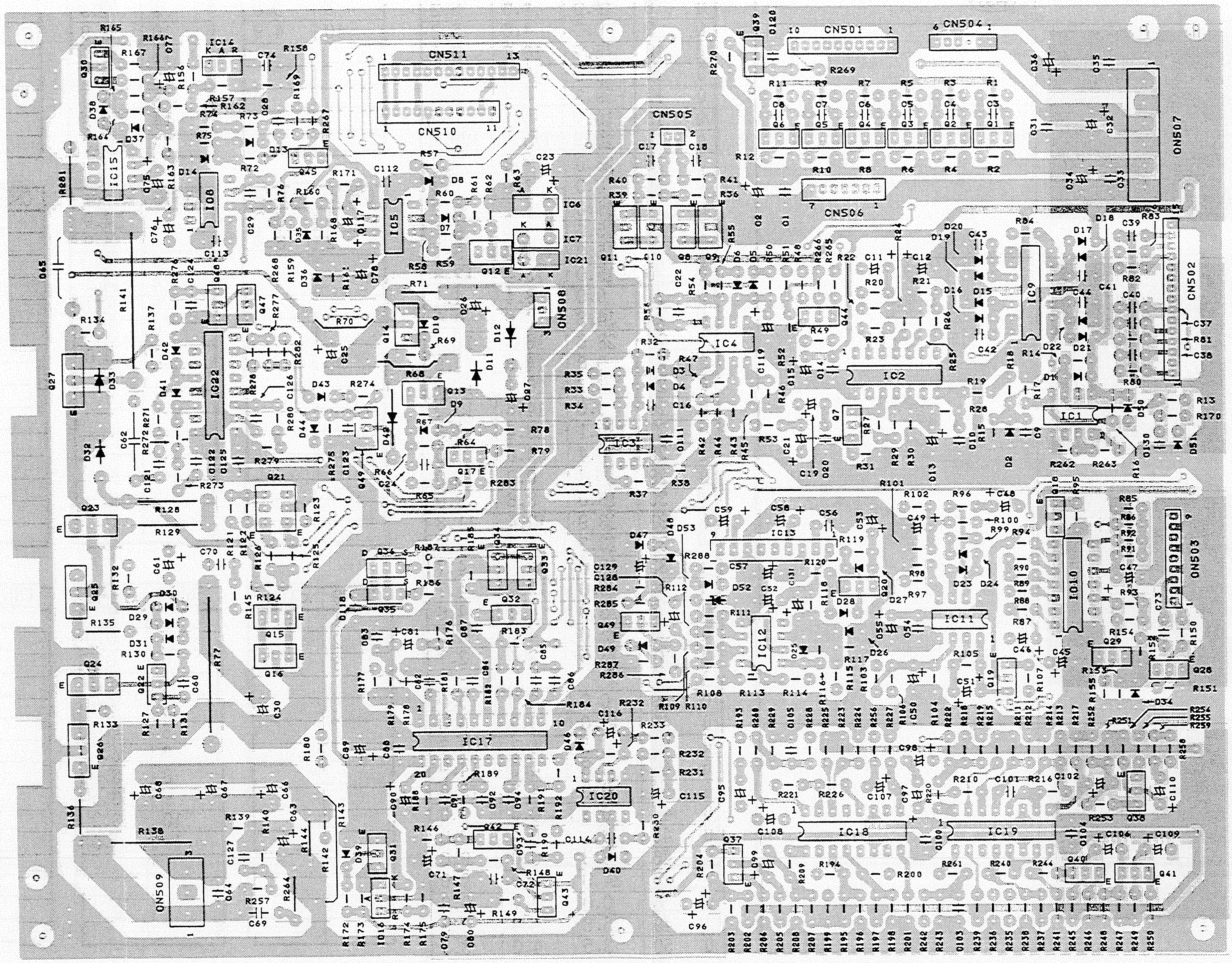
CN510	VOLTAGE
1	4.7
2	0.0
3	0.0
4	0.0
5	4.6
6	4.0
7	6.2
8	3.9
9	56.4
10	13.2
11	0.0

CN511	VOLTAGE
1	4.7
2	0.0
3	4.5
4	0.0
5	0.0
6	9.1
7	0.0
8	4.5
9	5.0
10	8.0
11	13.2
12	0.0
13	-121.6

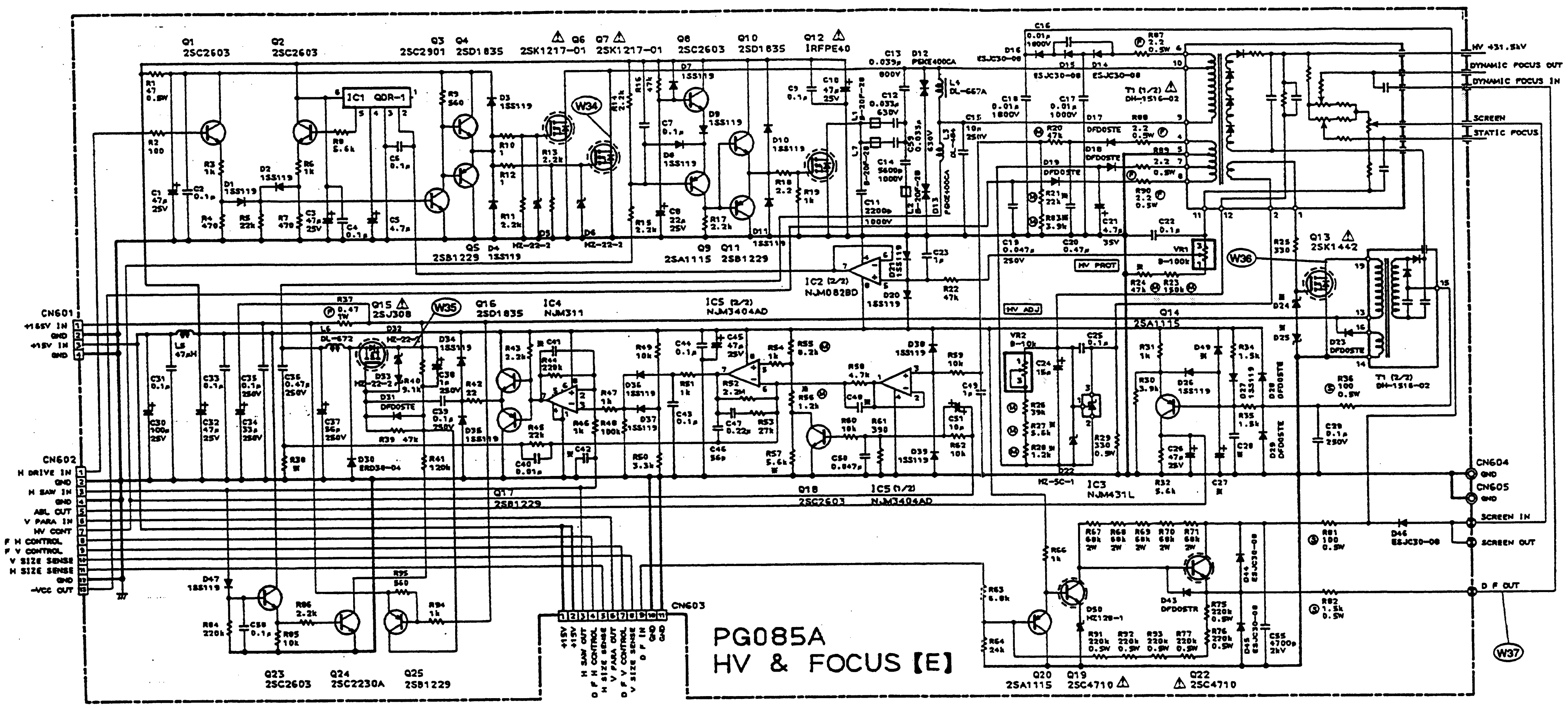
CN513	VOLTAGE
1	0.0
2	0.0

H & V DEF PWB (PG084A)

SOLDER SIDE



HV & FOCUS PWB (PG085A)


PG085A
HV & FOCUS【E】
CN601
+165V IN
GND
+15V IN
GND
CN602
H DRIVE IN
H SAW IN
ABL OUT
V PARA IN
HV CONT
D F H CONTROL
D F V CONTROL
V SIZE SENSE
H SIZE SENSE
-VCC OUT
CN603
CN604
CN605
SCREEN IN
SCREEN OUT
D F OUT
HV 431.5kV
DYNAMIC FOCUS OUT
DYNAMIC FOCUS IN
SCREEN
STATIC FOCUS
T1 DH-1516-02
IC1 QDR-1
IC2 NJM082BD
IC3 NJM431L
IC4 NJM311
IC5 NJM3404AD
Q1 2SC2603
Q2 2SC2603
Q3 2SC2901
Q4 2SD1835
Q5 2SB1229
Q6 2SK1217-01
Q7 2SK1217-01
Q8 2SC2603
Q9 2SA1115
Q10 2SD1835
Q11 2SB1229
Q12 IRFPE40
Q13 2SK1442
Q14 2SA1115
Q15 2SJ308
Q16 2SD1835
Q17 2SB1229
Q18 2SC2603
Q19 2SC4710
Q20 2SA1115
Q22 2SC4710
Q23 2SC2603
Q24 2SC2230A
Q25 2SB1229
W34
W35
W36
W37
HV ADJ
HV PROT

【Parts numbers are indicated as R3 instead of ROE003 in the case of resistors, as IC3 instead of ICE003 in the case of ICs

部品番号は、抵抗の場合 ROE003がR3, IC の場合 ICE003がIC3 の様に略記されています。】

NOTES

1. All capacitors are 50V unless otherwise noted. Unit is in FARAD (F).
2. All resistors are 0.25W unless otherwise noted. Unit is in OHM (Ω).
3. Components marked with ※ are subject to change without notice.
4. Semiconductors may be changed for equivalent ones.
5. Ⓜ : Fixed Metal Film Resistor
6. Ⓕ : Fuse Resistor
7. Ⓢ : Solid Resistor

注意

1. 指示なき抵抗は（Ω），コンデンサーは（F）
2. 指示なき抵抗ワッテージは0.25W, コンデンサー耐圧は50V
3. ※印は調整により変更することがある。
4. 半導体は相当規格品とおきかえることがある。
5. Ⓜ ：金属皮膜固定抵抗器
6. Ⓕ ：ヒューズ抵抗器
7. Ⓢ ：ソリッド抵抗器

Caution

1. Components enclosed with ☐ are sealed. When these components broke, refer servicing to qualified service personnel.
2. This unit contains critical components for X-radiation safety. When this unit broke, replace only with the same unit.

注意

1. ☐ で囲まれた部品は接着剤で固定されています。これらの部品がこわれたら、資格のあるサービスマンに修理を依頼して下さい。
2. このユニットはX線放射安全上、重要な部品を含んでいます。このユニットがこわれたら、同一のユニットと交換して下さい。

VOLTAGE

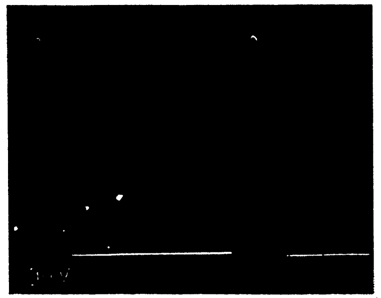
CN601	VOLTAGE
1	165.0
2	0.0
3	15.0
4	0.0

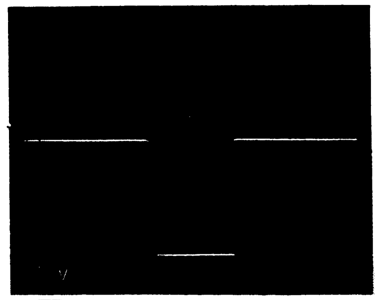
CN602	VOLTAGE
1	4.6
2	0.0
3	4.5
4	0.0
5	0.0
6	9.1
7	0.0
8	4.5
9	5.0
10	8.0
11	13.2
12	0.0
13	-122.0

CN603	VOLTAGE
1	15.0
2	15.0
3	4.5
4	4.5
5	13.3
6	9.1
7	5.0
8	8.0
9	12.7
10	0.0
11	0.0

CN604	VOLTAGE
1	0.0
2	0.0

WAVE FORM


W34


W35

W36

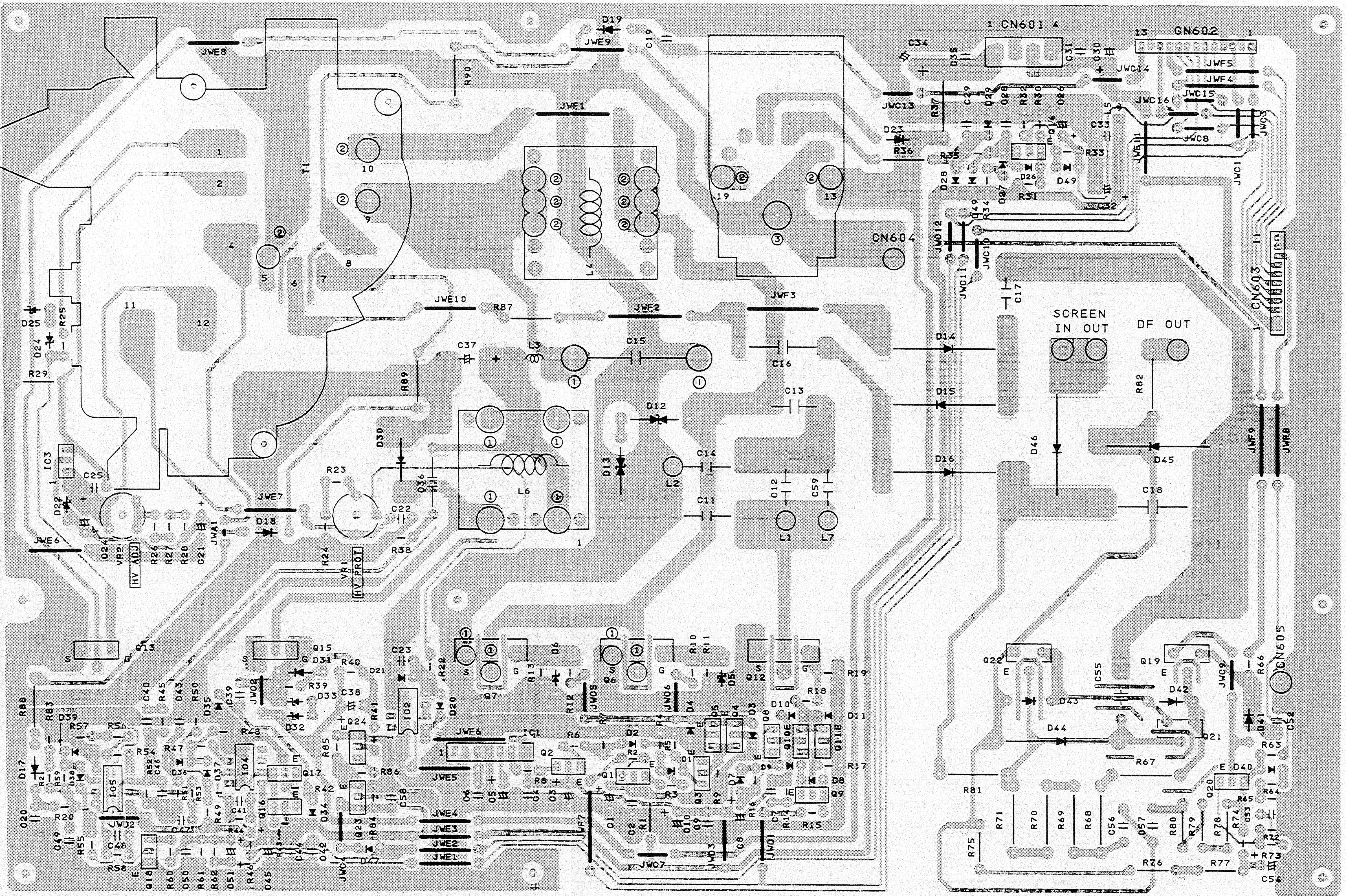
W37

HV & FOCUS PWB (PG085A)

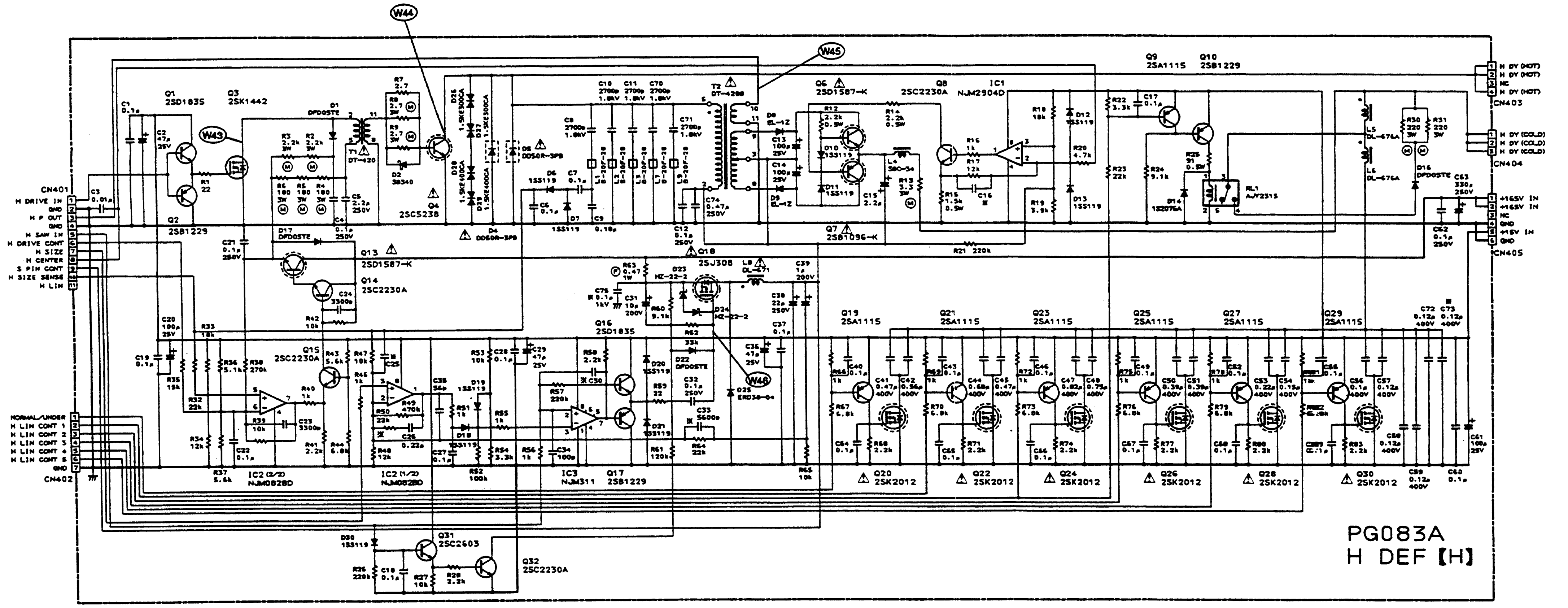
SOLDER SIDE

VOLTAGE

LOCATION	C	B	E
	D	G	S
Q 1	13.4	4.6	4.7
Q 2	14.7	0.0	0.0
Q 3	13.4	7.7	7.4
Q 4	7.7	0.0	0.0
Q 5	0.0	7.7	7.4
Q 6	*	7.4	0.0
Q 7	*	7.4	0.0
Q 8	14.7	14.7	12.4
Q 9	11.7	11.1	11.8
Q 10	14.7	11.7	11.0
Q 11	0.0	11.7	11.0
Q 12	*	11.1	0.0
Q 13	170.8	-5.4	0.0
Q 14	0.0	11.9	11.7
Q 15	165.0	158.0	98.0
Q 16	14.7	6.8	6.8
Q 17	0.0	6.8	6.8
Q 18	5.9	0.0	0.0
Q 19	695.0	13.3	12.7
Q 20	0.0	12.7	13.3
Q 21	-	-	-
Q 22	*	699.0	728.0
Q 23	14.7	5.8	5.2
Q 24	0.0	0.6	0.0


D19
JWE8
JWE9
C19
R90
1 CN601 4
C34
13 CN602 1
JWF5
JWF4
JWC14
JWC13
JWC15
JWC16
JWC8
JWC1
JWC3
R37
R36
R35
D23
R33
C33
D49
D26
D27
R31
D28
R34
C32
JWE1
JWE11
T1
L4
CN604
CN603
JWD12
JWD10
JWD11
C17
SCREEN
IN OUT
DF OUT
JWE10
R87
JWE2
JWF3
D25
R25
D24
R29
C37
L3
C15
C16
C13
D14
D15
D16
R82
R89
D12
D13
D30
L2
C14
C12
C59
C11
L1
L7
L6
C36
R23
C22
R38
D46
D45
C18
JWF9
JWF8
IC3
C25
D22
JWE6
VR2
D24
R26
R27
R28
C21
JWA1
HV ADJ
JWE7
D18
R24
VR1
HV PROT
Q13
Q15
D31
R40
D21
C23
R22
D20
Q7
Q6
D6
R13
R12
JWD5
JWD6
R10
R11
Q12
R19
R18
D10
D11
Q22
C55
Q19
JWC9
R66
CN605
D43
D42
D41
C52
D44
Q21
R63
R67
E D40
R64
Q20
R65
R81
R71
R70
R69
R68
C56
C57
R80
R79
R78
R74
C53
R72
R73
R75
R76
R77
C54
R88
R83
D39
R57
R56
C40
R45
D43
R50
D35
D39
JWD2
R39
D33
C38
Q24
R41
IC2
R48
D32
R47
R54
D17
R59
D38
IC5
R52
C46
D36
D37
IC4
Q17
R85
R86
JWE6
IC1
R6
D2
R5
Q2
JWE5
R8
Q1
R3
Q3
R9
Q10
Q11
Q9
D8
R17
R16
R15
D7
D9
D20
R20
D49
R55
JWD2
C48
R58
Q18
R60
D50
R61
R62
D51
R46
D45
C44
C42
JWD4
Q23
R84
D47
D34
Q16
R42
R49
C41
C47
R53
C58
JWE4
JWE3
JWE2
JWE1
JWE7
D1
Q2
R1
JWC7
JWD3
C8
JWD1

H DEF PWB (PG083A)


W44
W45
W43
W46
CN401
H DRIVE IN 1
GND 2
H P OUT 3
GND 4
H SAW IN 5
H DRIVE CONT 6
H SIZE 7
H CENTER 8
S PIN CONT 9
H SIZE SENSE 10
H LIN 11
NORMAL/UNDER 1
H LIN CONT 1 2
H LIN CONT 2 3
H LIN CONT 3 4
H LIN CONT 4 5
H LIN CONT 5 6
GND 7
CN402
1 H DY (HOT)
2 H DY (HOT)
3 NC
4 H DY (HOT)
CN403
1 H DY (COLD)
2 H DY (COLD)
3 H DY (COLD)
CN404
1 +165V IN
2 +165V IN
3 NC
4 GND
5 +15V IN
6 GND
CN405
Q1 2SD1835
Q3 2SK1442
Q2 2SB1229
Q4 2SC5238
Q6 2SD1587-K
Q8 2SC2230A
IC1 NJM2904D
Q7 2SB1096-K
Q9 2SA1115
Q10 2SB1229
Q13 2SD1587-K
Q14 2SC2230A
Q15 2SC2230A
Q16 2SD1835
Q17 2SB1229
Q18 2SJ308
IC2 (2/2) NJM082BD
IC2 (1/2) NJM082BD
IC3 NJM311
Q19 2SA1115
Q21 2SA1115
Q23 2SA1115
Q25 2SA1115
Q27 2SA1115
Q29 2SA1115
Q20 2SK2012
Q22 2SK2012
Q24 2SK2012
Q26 2SK2012
Q28 2SK2012
Q30 2SK2012
Q31 2SC2603
Q32 2SC2230A
T1 DT-420
T2 DT-4280
RL1 AJY2315
PG083A
H DEF【H】

【Parts numbers are indicated as R3 instead of ROH003 in the case of resistors, as IC3 instead of ICH003 in the case of ICs.

部品番号は、抵抗の場合 ROH003がR3, IC の場合 ICH003が IC3 の様に略記されています。】

NOTES

1. All capacitors are 50V unless otherwise noted. Unit is in FARAD (F).
2. All resistors are 0.25W unless otherwise noted. Unit is in OHM (Ω).
3. Components marked with ※ are subject to change without notice.
4. Semiconductors may be changed for equivalent ones.
5. Ⓜ : Fixed Metal Film Resistor
6. Ⓕ : Fuse Resistor

注意）

1. 指示なき抵抗は（Ω）、コンデンサーは（F）
2. 指示なき抵抗ワッテージは0.25W, コンデンサー耐圧は50V
3. ※印は開発により変更することがある。
4. 半導体は相当規格品とおきかえることがある。
5. Ⓜ：金属皮膜固定抵抗器
6. Ⓕ：ヒューズ抵抗器

VOLTAGE

CN401	VOLTAGE
1	4.7
2	0.0
3	0.0
4	0.0
5	4.6
6	4.1
7	6.2
8	3.9
9	56.4
10	13.2
11	0.0

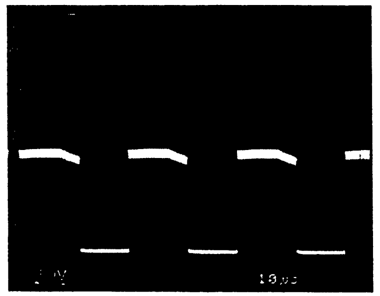
CN402	VOLTAGE
1	14.9
2	14.9
3	0.0
4	14.9
5	0.0
6	0.0
7	0.0

CN403	VOLTAGE
1	*
2	*
3	*
4	*

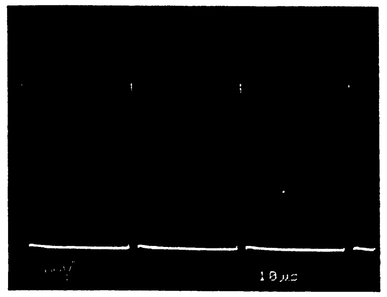
CN404	VOLTAGE
1	56.3
2	56.3
3	56.3

CN405	VOLTAGE
1	165.0
2	165.0
3	0.0
4	0.0
5	15.0
6	0.0

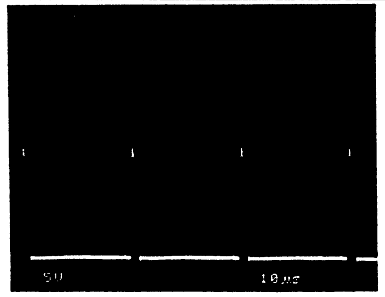
WAVE FORM



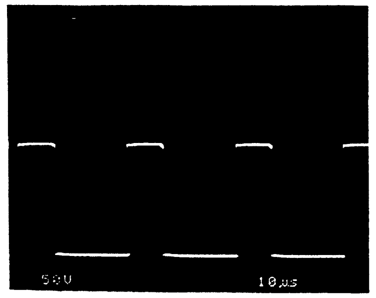
W43



W44



W45



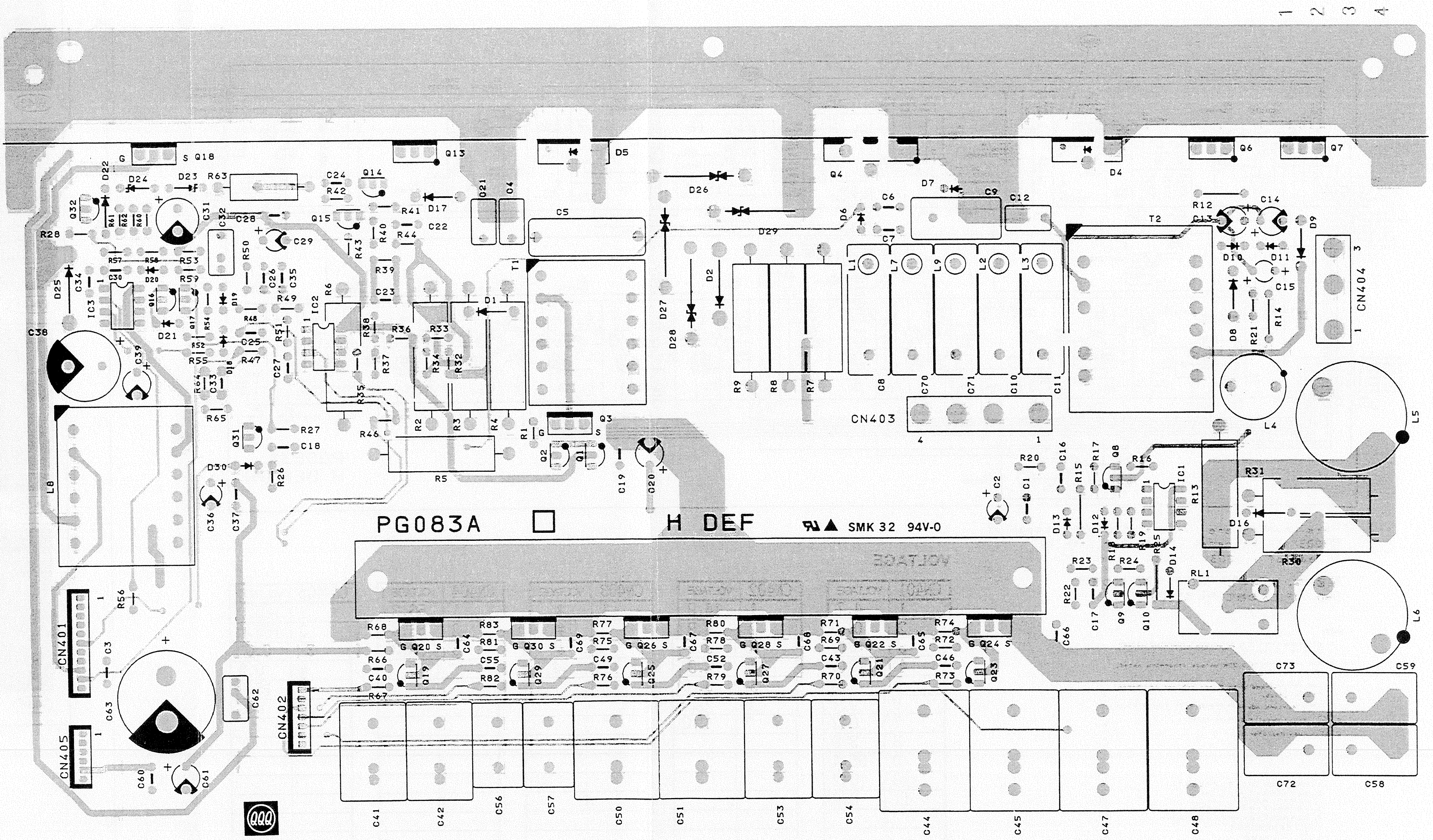
W46

H DEF PWB (PG083A)

PARTS SIDE

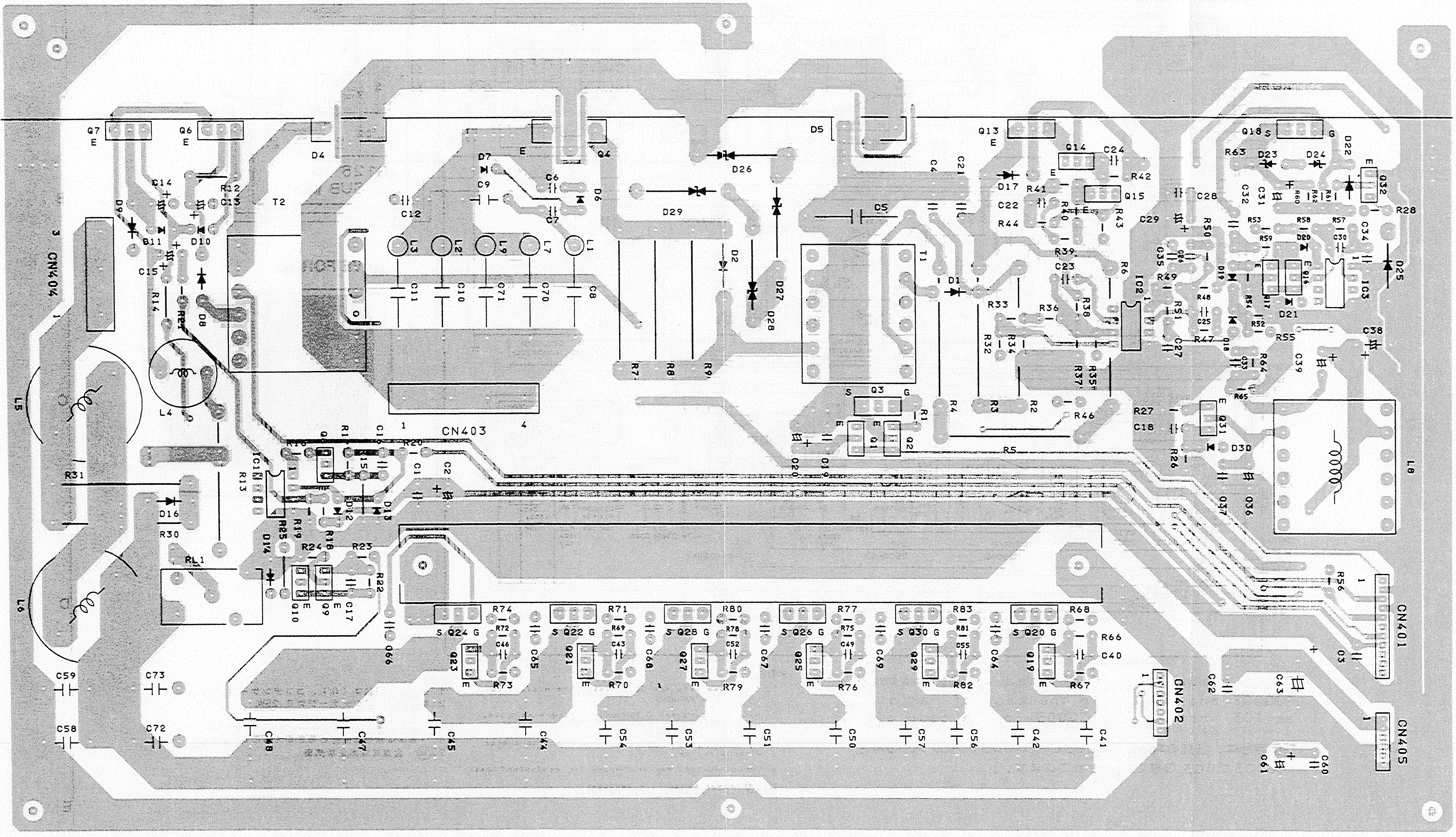
VOLTAGE

Q 1	15.0	4.7	4.9
Q 2	0.0	4.7	4.9
Q 3	85.4	4.9	0.0
Q 4	*	-1.0	0.0
Q 5	-	-	-
Q 6	59.7	56.5	56.2
Q 7	52.8	56.0	56.2
Q 8	53.2	2.6	2.0
Q 9	14.9	14.2	15.0
Q 10	0.1	14.9	15.0
Q 11	-	-	-
Q 12	-	-	-
Q 13	166.0	119.7	119.3
Q 14	166.0	116.6	119.7
Q 15	116.6	8.1	7.6
Q 16	14.9	10.2	10.0
Q 17	0.0	10.2	10.0
Q 18	165.0	161.3	58.5
Q 19	0.0	14.9	15.0
Q 20	40.3	0.0	0.0
Q 21	0.0	14.9	15.0
Q 22	40.3	0.0	0.0
Q 23	14.9	14.2	15.0
Q 24	0.0	14.9	0.0
Q 25	0.0	14.9	15.0
Q 26	0.0	0.0	0.0
Q 27	14.9	14.2	15.0
Q 28	0.0	14.9	0.0
Q 29	14.9	14.2	15.0
Q 30	0.0	14.9	0.0

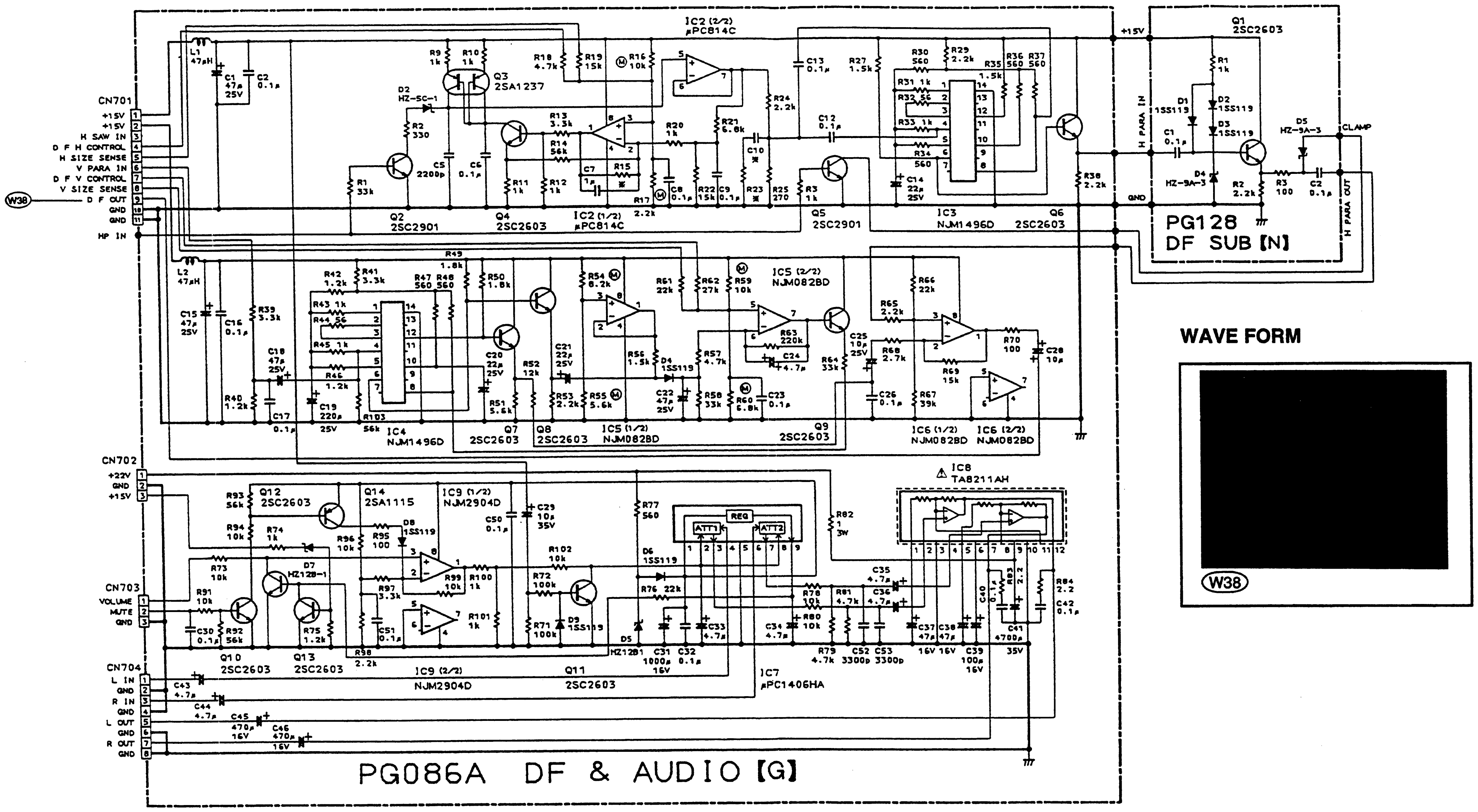

1 2 3 4
PG083A
H DEF
SMK 32 94V-0
Q18
Q13
D5
Q4
D4
Q6
Q7
T2
T1
D26
D29
C5
CN403
CN404
CN401
CN402
CN405
L4
L5
L6
L8
RL1
IC1
IC2
IC3
R30
R31
D16
C41
C42
C56
C57
C50
C51
C53
C54
C44
C45
C47
C48
C72
C58
C73
C59
Q20
Q30
Q26
Q28
Q22
Q24
Q19
Q29
Q25
Q27
Q21
Q23

H DEF PWB (PG083A)

SOLDER SIDE


Q7
Q6
D4
T2
CN404
L5
L4
L6
R31
D16
R30
RL1
CN403
D5
D26
D29
Q13
Q14
Q15
Q18
T1
D1
Q3
IC2
IC3
L8
CN401
CN402
CN405
Q24
Q22
Q28
Q26
Q30
Q20
R74
R71
R80
R77
R83
R68
C59
C58
C73
C72

DF & AUDIO PWB (PG086A)


CN701
+15V
+15V
H SAW IN
D F H CONTROL
H SIZE SENSE
V PARA IN
D F V CONTROL
V SIZE SENSE
D F OUT
GND
GND
HP IN
W38
L1 47μH
L2 47μH
Q2 2SC2901
Q3 2SA1237
Q4 2SC2603
IC2 (1/2) μPC814C
IC2 (2/2) μPC814C
Q5 2SC2901
IC3 NJM1496D
Q6 2SC2603
+15V
Q1 2SC2603
D1 1SS119
D2 1SS119
D3 1SS119
D4 HZ-9A-3
D5 HZ-9A-3
CLAMP
H PARA IN
H PARA OUT
GND
PG128
DF SUB [N]
IC4 NJM1496D
Q7 2SC2603
Q8 2SC2603
IC5 (1/2) NJM082BD
IC5 (2/2) NJM082BD
Q9 2SC2603
IC6 (1/2) NJM082BD
IC6 (2/2) NJM082BD
CN702
+22V
GND
+15V
CN703
VOLUME
MUTE
GND
CN704
L IN
GND
R IN
GND
L OUT
GND
R OUT
GND
Q12 2SC2603
Q14 2SA1115
IC9 (1/2) NJM2904D
IC9 (2/2) NJM2904D
Q10 2SC2603
Q13 2SC2603
Q11 2SC2603
D7 HZ12B-1
D5 HZ12B1
D8 1SS119
D9 1SS119
D6 1SS119
REG
ATT1
ATT2
IC7 μPC1406HA
IC8 TA8211AH
C43 4.7μ
C44 4.7μ
C45 470μ 16V
C46 470μ 16V
PG086A DF & AUDIO [G]

WAVE FORM

W38

【Parts numbers are indicated as R3 instead of ROG003 and RON003 in the case of resistors, as IC3 instead of ICG003 in the case of ICs.

部品番号は、抵抗の場合 ROG003とRON003が R3, IC の場合 ICG003が IC3 の様に略記されています。】

NOTES

1. All capacitors are 50V unless otherwise noted. Unit is in FARAD (F).
2. All resistors are 0.25W unless otherwise noted. Unit is in OHM (Ω).
3. Components marked with ※ are subject to change without notice.
4. Semiconductors may be changed for equivalent ones.
5. Ⓜ: Fixed Metal Film Resistor

注意）

1. 指示なき抵抗は（Ω），コンデンサーは（F）
2. 指示なき抵抗ワッテージは0.25W,
   コンデンサー耐圧は50V
3. ※印は調整により変更することがある。
4. 半導体は相当規格品とおきかえることがある。
5. Ⓜ：金属皮膜固定抵抗器

DF & AUDIO PWB (PG086A)

SOLDER SIDE

VOLTAGE

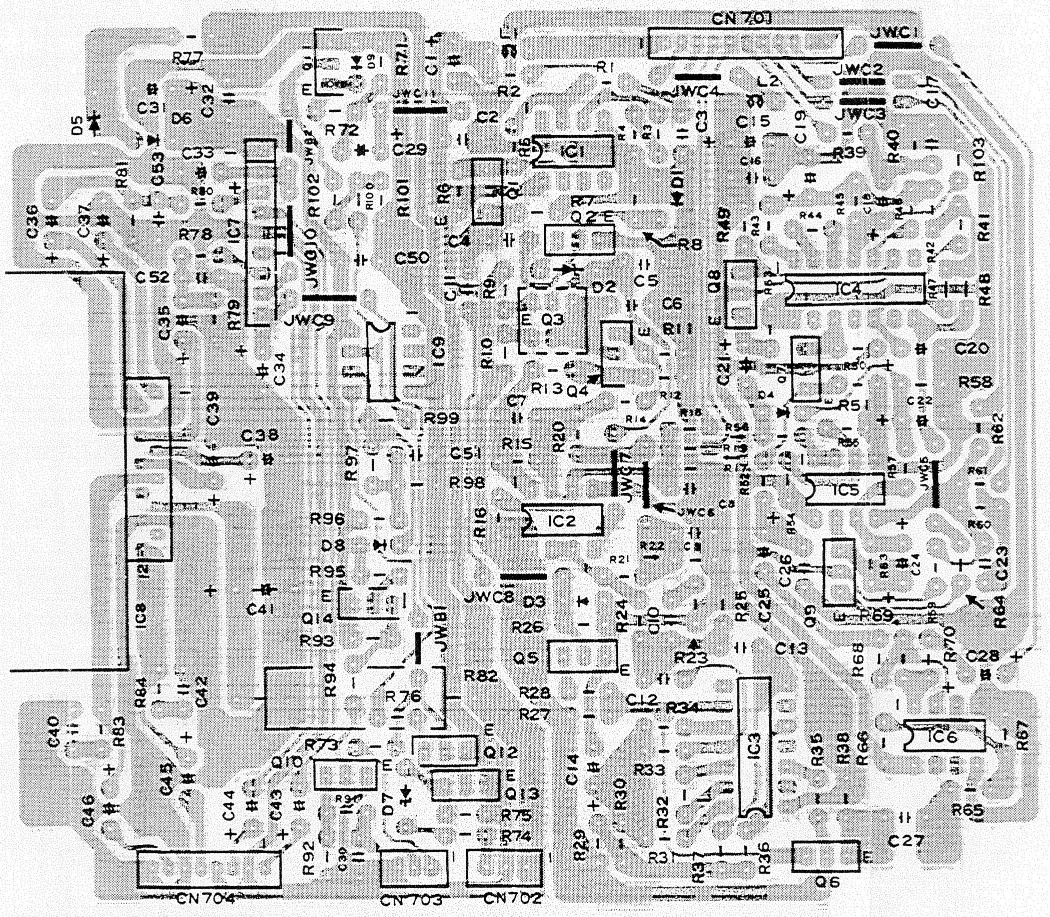
Q 1	14.8	9.1	8.4
Q 2	3.1	-0.7	0.0
Q 3	1.3	1.3	14.6
Q 4	1.3	0.8	0.2
Q 5	-0.7	0.9	0.0
Q 6	15.0	9.1	8.4
Q 7	14.9	9.6	8.9
Q 8	14.9	12.1	11.4
Q 9	15.0	14.2	13.6
Q 10	0.0	0.0	0.0
Q 11	2.3	0.0	0.0
Q 12	3.0	0.0	0.0
Q 13	0.0	0.7	0.0
Q 14	0.2	12.2	12.3

CN701	VOLTAGE
1	15.0
2	15.0
3	4.5
4	4.5
5	13.2
6	9.1
7	5.0
8	8.0
9	12.7
10	0.0
11	0.0

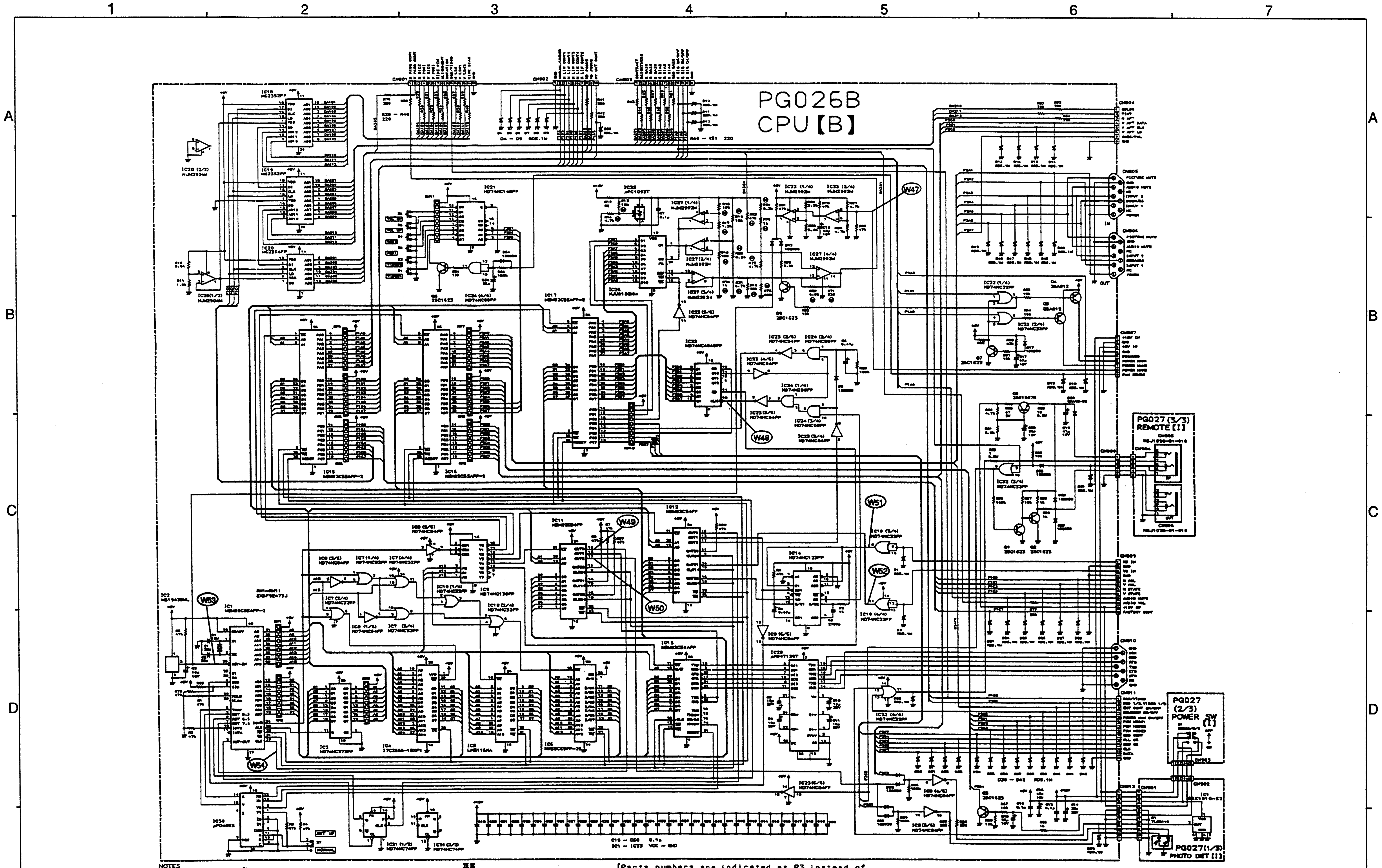
CN702	VOLTAGE
1	27.1
2	0.0
3	15.0

CN703	VOLTAGE
1	3.0
2	0.0
3	0.0

CN704	VOLTAGE
1	4.8
2	0.0
3	4.8
4	0.0
5	0.0
6	0.0
7	0.0
8	0.0


CN701
JWC1
JWC2
JWC3
JWC4
IC1
IC2
IC3
IC4
IC5
IC6
JWC9
JWC8
CN704
CN703
CN702

CPU PWB (PG026B)

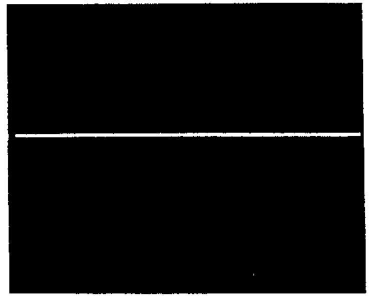

PG026B
CPU【B】
PG027(3/3)
REMOTE [I]
PG027
(2/3)
POWER SW
[I]
PG027(1/3)
PHOTO DET [I]
W47
W48
W49
W50
W51
W52
W53
W54
SET UP
NORMAL
C19 ~ C50 0.1μ
IC1 ~ IC33 VCC ~ GND
1
2
3
4
5
6
7
A
B
C
D
E

NOTES
1. All capacitors are 50V unless otherwise noted. Unit is in FARAD (F).
2. All resistors are 0.25W unless otherwise noted. Unit is in OHM (Ω).
3. Components marked with ※ are subject to change without notice.
4. Semiconductors may be changed for equivalent ones.
5. Ⓜ: Fixed Metal Film Resistor
6. Ⓣ: Tantalum Capacitor

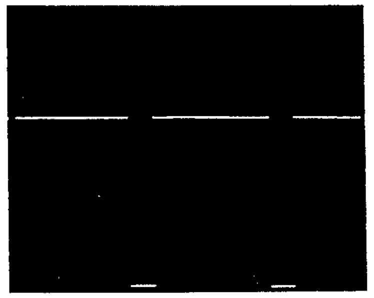
注意
1. 指示なき抵抗は (Ω)，コンデンサーは (F)
2. 指示なき抵抗ワッテージは0.25W.
コンデンサー耐圧は50V
3. 部品は改良により変更することがある.
4. 半導体は相当規格品とおきかえることがある.
5. Ⓜ：金属皮膜固定抵抗器
6. Ⓣ：タンタルコンデンサ

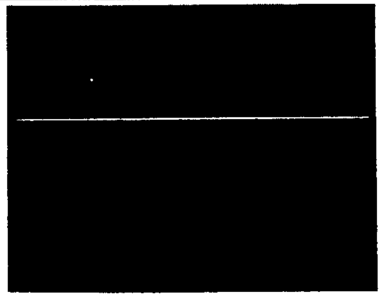
[Parts numbers are indicated as R3 instead of ROB003 in the case of resistors, as IC3 instead of ICB003 in the case of ICs.
部品番号は、抵抗の場合 ROB003がR3, IC の場合 ICB003がIC3 の様に略記されています。]

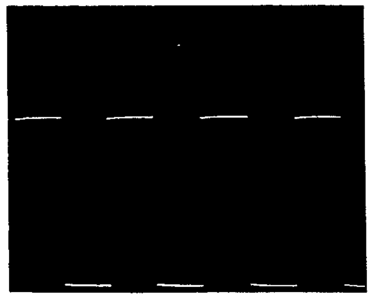
WAVE FORM

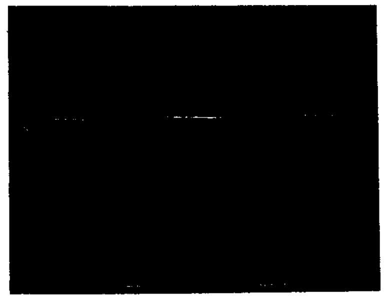

W47

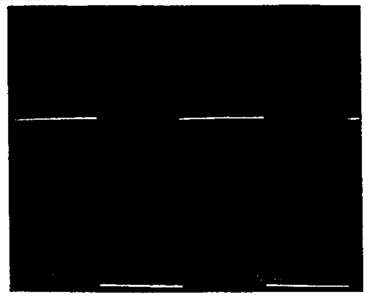
W52

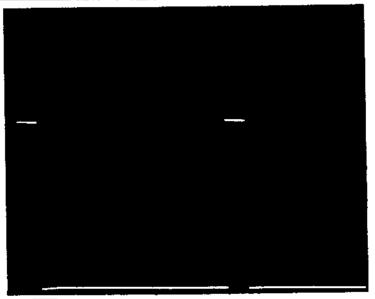

W48


W53


W49


W54


W50


W51

VOLTAGE

CN801	VOLTAGE
1	8.9
2	3.1
3	4.1
4	1.9
5	5.3
6	3.5
7	3.7
8	3.2
9	2.9
10	3.9
11	4.4
12	3.3
13	3.3
14	3.3
15	0.0

CN802	VOLTAGE
1	0.0
2	0.0
3	0.0
4	4.6
5	0.0
6	4.6
7	4.5
8	4.5
9	5.0
10	4.9

CN803	VOLTAGE
1	4.2
2	3.5
3	2.7
4	2.5
5	2.6
6	4.0
7	3.0
8	2.4
9	1.8
10	0.0
11	0.0
12	0.0
13	0.0

CN804	VOLTAGE
1	4.2
2	2.2
3	2.5
4	4.6
5	4.5
6	4.6
7	4.4
8	0.0

CN805	VOLTAGE
1	3.4
2	3.4
3	3.4
4	3.4
5	3.4
6	0.0
7	3.4
8	0.0
9	0.0

CN806	VOLTAGE
1	3.4
2	3.4
3	3.4
4	3.4
5	3.4
6	0.0
7	3.4
8	0.0
9	0.0

CN807	VOLTAGE
1	15.0
2	0.0
3	5.0
4	0.0
5	0.0
6	5.0
7	5.0
8	4.4
9	0.0

CN808	VOLTAGE
1	8.3
2	4.9
3	4.9
4	8.3
5	0.0

CN809	VOLTAGE
1	0.3
2	0.0
3	0.7
4	0.0
5	0.0
6	3.8
7	0.0
8	3.7
9	0.0
10	3.0
11	15.0
12	4.7

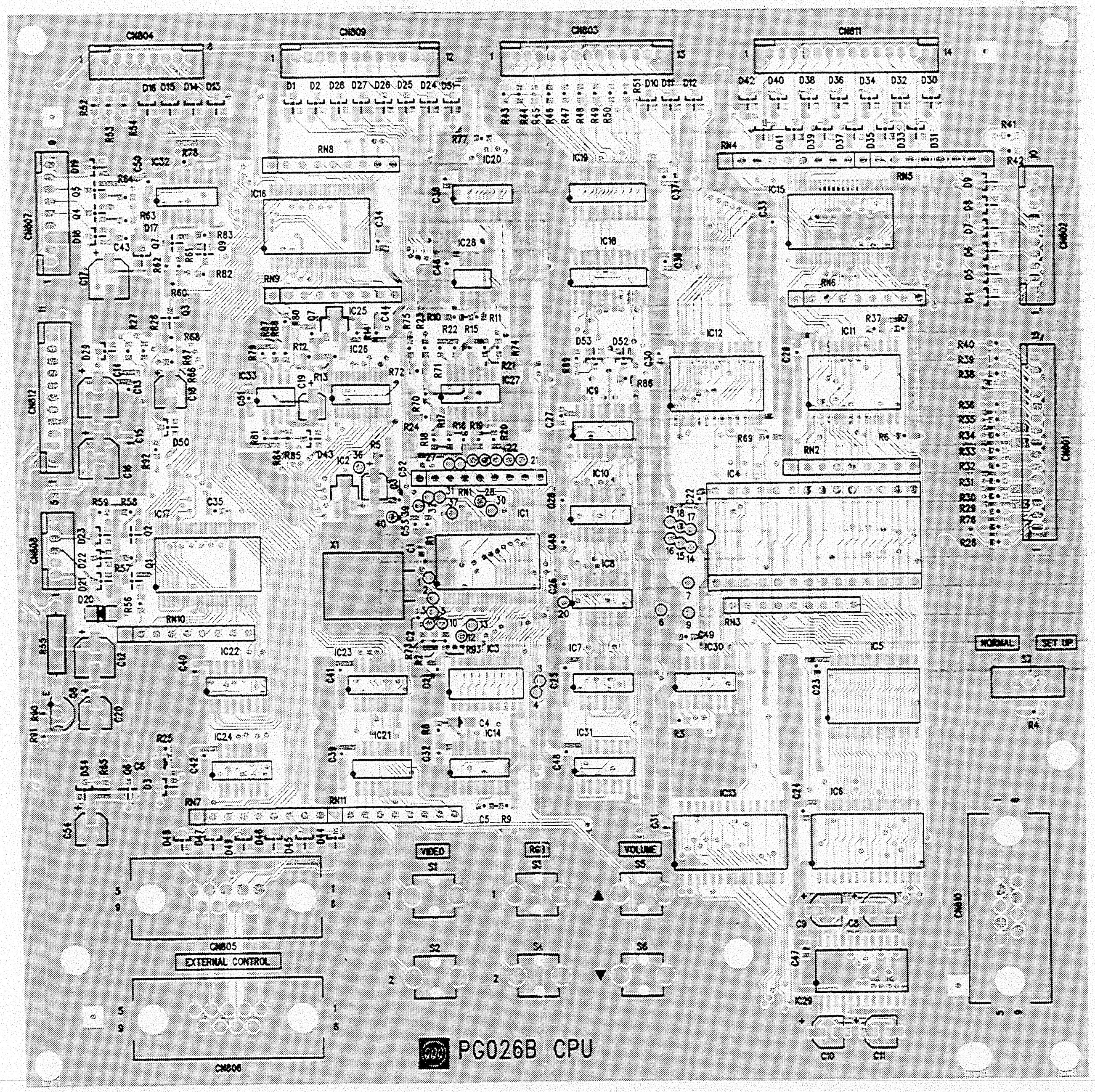
CN810	VOLTAGE
1	0.0
2	0.0
3	-9.8
4	-9.8
5	0.0
6	0.0
7	-9.8
8	0.0
9	0.0

CN811	VOLTAGE
1	4.4
2	4.4
3	3.4
4	0.0
5	3.4
6	3.3
7	3.4
8	3.3
9	0.0
10	4.6
11	4.7
12	4.6
13	4.7
14	0.0

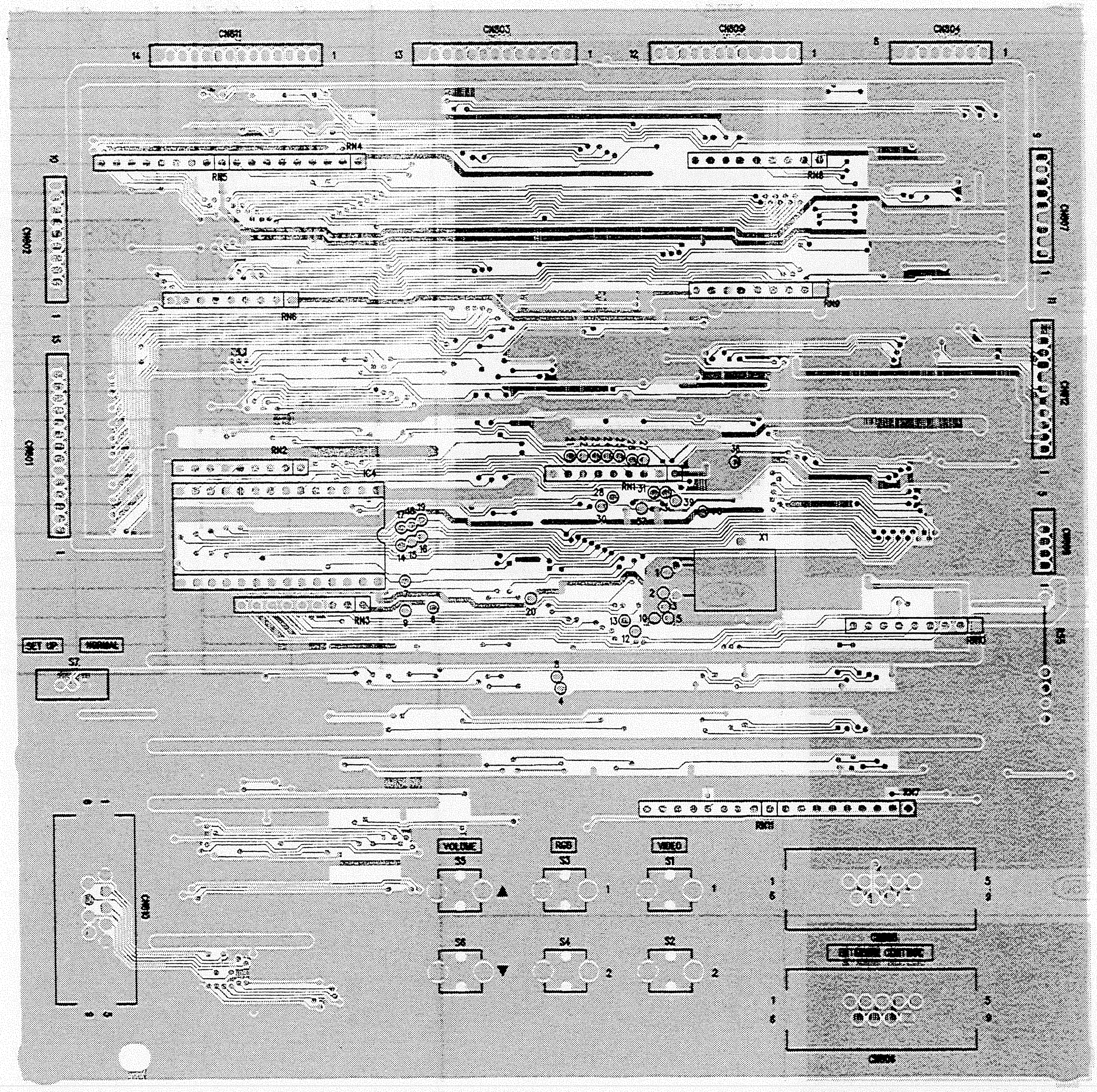
CN812	VOLTAGE
1	5.1
2	15.0
3	5.1
4	15.0
5	0.0
6	0.0
7	0.0
8	3.5
9	0.0
10	1.0
11	0.0

CPU PWB (PG026B)

PARTS SIDE


CN804
CN809
CN803
CN811
CN807
CN812
CN808
CN802
CN801
CN810
CN805
CN806
X1
EXTERNAL CONTROL
VIDEO
RGB
VOLUME
S1
S2
S3
S4
S5
S6
S7
NORMAL
SET UP
PG026B CPU

SOLDER SIDE


CN811
CN803
CN809
CN804
CN807
CN812
CN808
CN802
CN801
CN810
CN805
CN806
X1
SET UP
NORMAL
S7
VOLUME
RGB
VIDEO
S1
S2
S3
S4
S5
S6
EXTERNAL CONTROL

SW REG PWB (PG042B)

NOTES
1. All capacitors are 50V unless otherwise noted. Unit is in FARAD (F).
2. All resistors are 0.25W unless otherwise noted. Unit is in OHM (Ω).
3. Components marked with ※ are subject to change without notice.
4. Semiconductors may be changed for equivalent ones.
5. Ⓜ : Fixed Metal Film Resistor
6. Ⓕ : Fuse Resistor
7. Ⓢ : Solid Resistor

注意
1. 指示なき抵抗は（Ω）、コンデンサーは（F）
2. 指示なき抵抗ワッテージは0.25W。コンデンサー耐圧は50V
3. ※印は改善により変更することがある。
4. 半導体は相当同等品と置きかえることがある。
5. Ⓜ ：金属皮膜固定抵抗器
6. Ⓕ ：ヒューズ抵抗器
7. Ⓢ ：ソリッド抵抗器

8. FUSE (F1) ☆

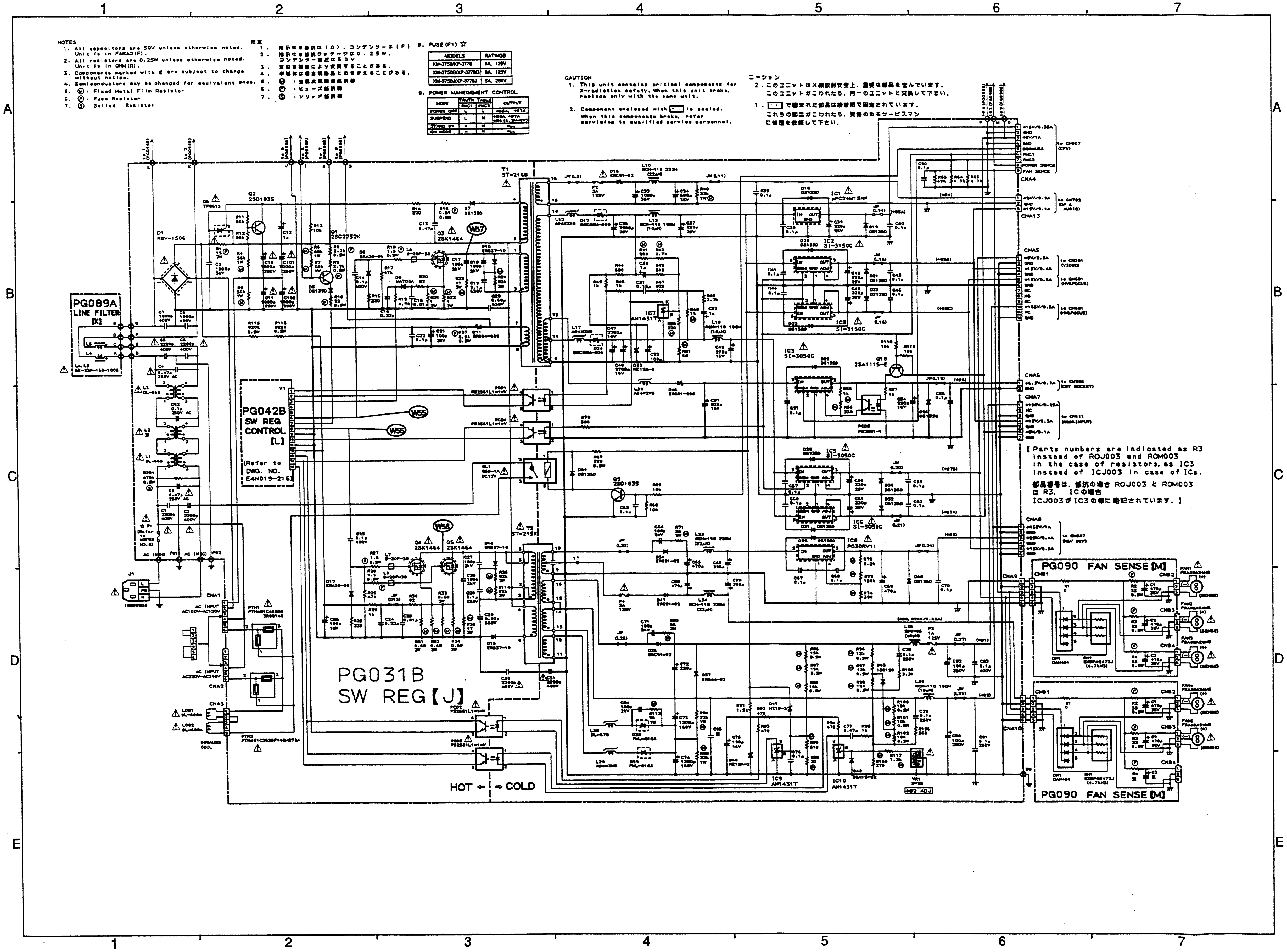
MODELS	RATINGS
XM-3750/XP-3778	8A, 125V
XM-3750G/XP-3778G	8A, 125V
XM-3750J/XP-3778J	5A, 250V

9. POWER MANEGEMENT CONTROL

MODE	TRUTH TABLE		OUTPUT
	PMC1	PMC2	
POWER OFF	L	L	+65A, +67A
SUSPEND	L	H	+65A, +67A +66 (6.3V→6V)
STAND BY	H	H	ALL
ON MODE	H	H	ALL

CAUTION
1. This unit contains critical components for X-radiation safety. When this unit broke, replace only with the same unit.
2. Component enclosed with [ ] is sealed. When this components broke, refer servicing to qualified service personnel.

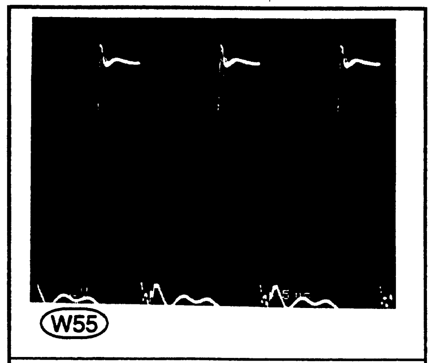
コーション
2．このユニットはX線放射安全上、重要な部品を含んでいます。このユニットがこわれたら、同一のユニットと交換して下さい。
1．[ ] で囲まれた部品は接着剤で固定されています。これらの部品がこわれたら、資格のあるサービスマンに修理を依頼して下さい。

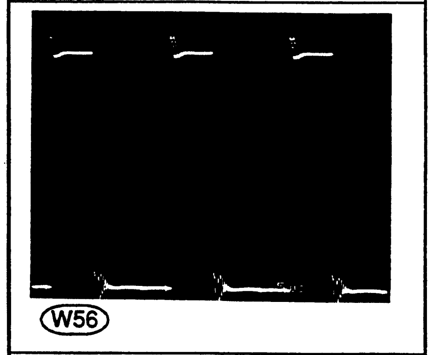

1
2
3
4
5
6
7
A
B
C
D
E
PG089A
LINE FILTER
[K]
PG042B
SW REG
CONTROL
[L]
(Refer to
DWG. NO.
E4N019-216)
PG031B
SW REG【J】
HOT ⇐ ⇒ COLD
PG090 FAN SENSE [M]
T1 ST-216B
T2 ST-215K
D1 RBV-1506
Q1 2SC2752K
Q2 2SD1835
Q3 2SK1464
Q4 2SK1464
Q5 2SK1464
Q9 2SD1835
Q10 2SA1115-E
IC1 μPC24M15HF
IC2 SI-3150C
IC3 SI-3050C
IC5 SI-3050C
IC6 SI-3050C
IC7 AN1431T
IC8 PQ30RV11
IC9 AN1431T
IC10 AN1431T
J1
CNA1
AC INPUT
CNA2
CNA3
DEGAUSS COIL
CNA4
to CN607 (CPU)
CNA13
to CN702 (DF & AUDIO)
CNA5
to CN201 (VIDEO)
to CN501 (DYN.FOCUS)
CNA6
+6.3V/0.7A
GND
to CN306 (CRT SOCKET)
CNA7
+130V/0.25A
NC
GND
+15V/0.3A
GND
+5V/0.1A
GND
to CN111 (RGB&INPUT)
CNA8
+165V/1A
GND
+25V/0.4A
GND
+15V/0.5A
GND
to CN687 (H&V DEF)
CNA9
CNA10
W55
W56
W57
W58

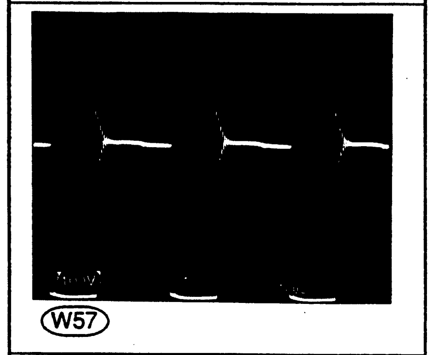
[Parts numbers are indicated as R3 instead of ROJ003 and ROM003 in the case of resistors, as IC3 instead of ICJ003 in case of ICs.

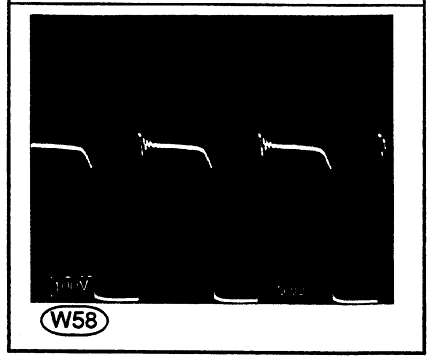
部品番号は、抵抗の場合 ROJ003 と ROM003 は R3、ICの場合 ICJ003 が IC3 の様に略記されています。]

WAVE FORM



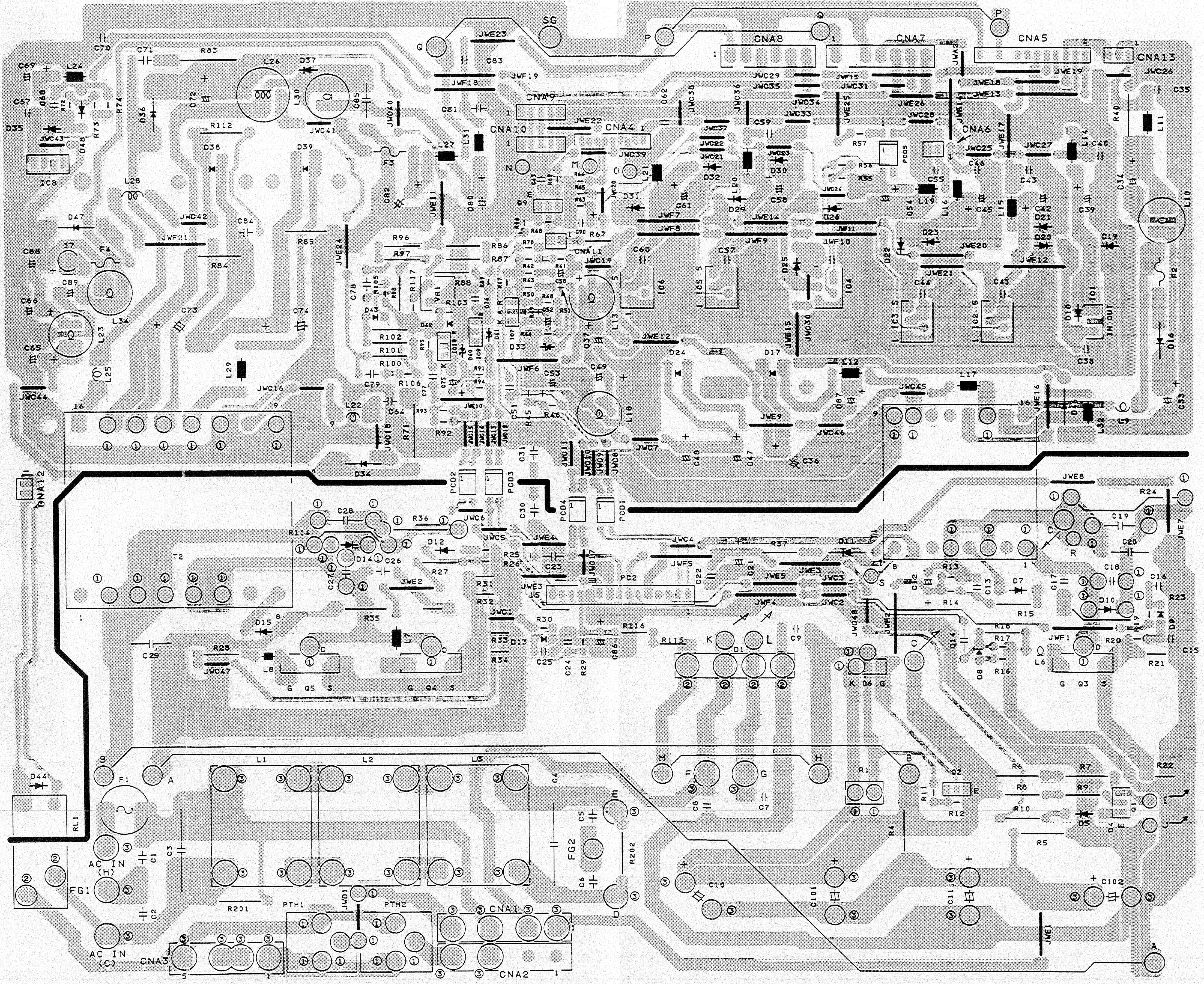




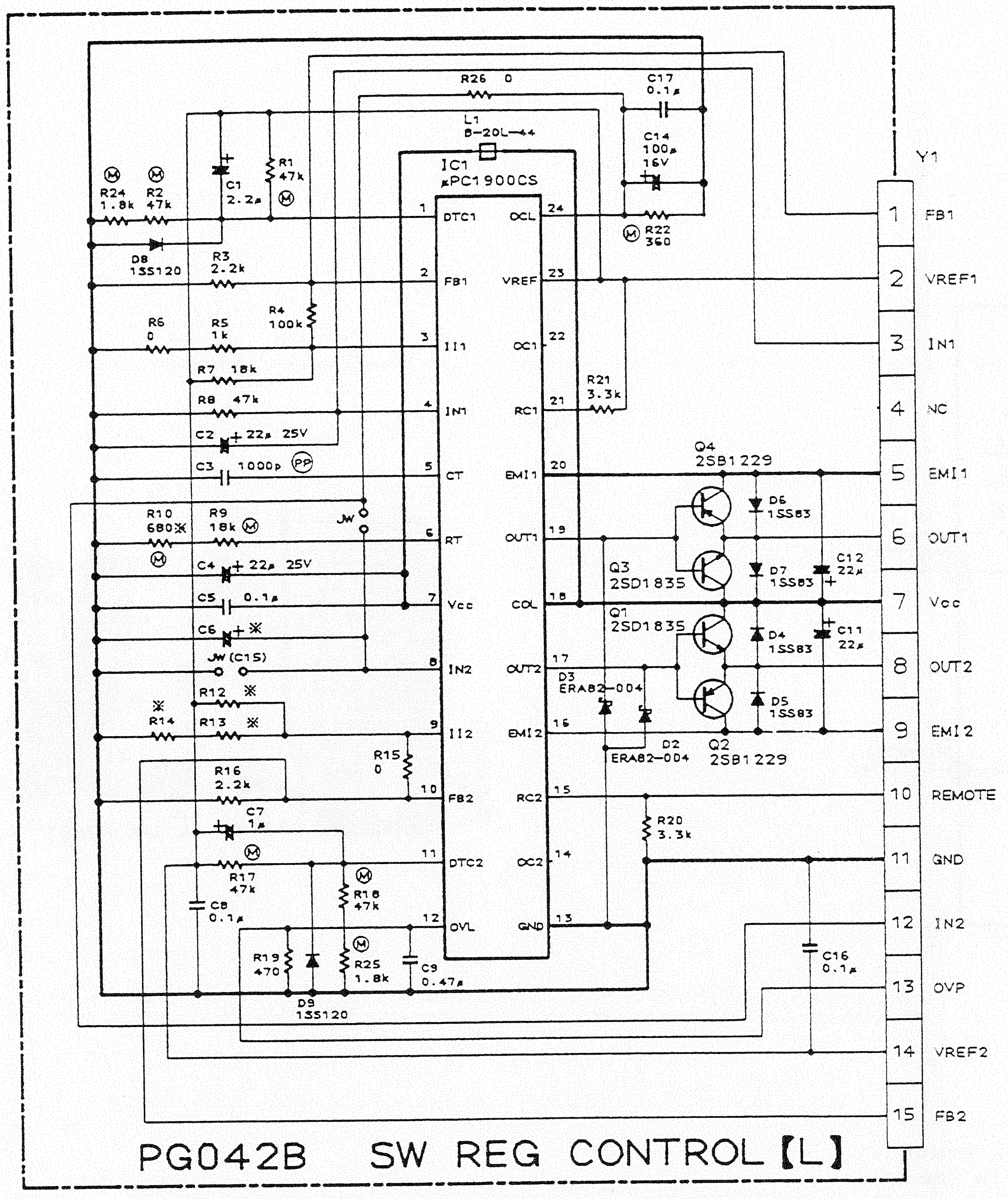


SE REG PWB (PG042B)

SOLDER SIDE


Q
JWE23
SG
P
Q
CNA8
CNA7
P
CNA5
CNA13
JWC26
C35
C70
C71
R83
C69
L24
C67
D35
JWC43
IC8
R74
R73
R72
D36
D72
R112
D38
L26
D37
L30
D85
JWC41
D39
C83
JWF18
JWF19
CNA9
C81
L31
L27
F3
JWD40
CNA10
JWE22
CNA4
N
M
Q9
E
JWC29
JWC35
JWC34
JWC33
JWF15
JWC31
JWE25
JWE26
JWC28
JWE18
JWF13
JWE19
JWE17
CNA6
JWC25
C46
JWC27
C40
L14
L11
R40
L10
C59
JWC37
JWC22
JWC21
JWC23
D30
D32
L21
JWC39
D31
C61
JWF7
JWF8
L20
D29
C58
JWE14
JWF9
D26
JWF11
JWF10
R57
R56
R55
PCD5
C55
L19
D54
L16
C45
L15
C42
D21
C39
C34
C43
L28
D47
JWC42
C84
R85
JWF21
R84
JWE24
C88
C89
F4
C66
C65
L34
L23
C73
C74
L25
L29
R96
R97
R86
R87
R117
VR1
R88
R103
C78
D43
R102
R101
R100
R106
C79
C77
JWC16
L22
C64
R93
R92
R71
JWD18
D34
C60
C57
JWC19
CNA11
R67
IC6
IC5
IC4
D25
D22
D23
JWE20
JWE21
C44
C41
JWF12
D20
D19
IC3
IC2
IC1
D16
D18
IN OUT
F2
C38
L13
Q37
D33
JWF6
C53
C49
L18
JWE12
D24
JWE15
JWD30
D17
L12
L17
D87
JWC45
JWE16
L32
L9
C33
JWE9
JWC46
C47
C48
C36
JWC7
JWD11
JWD10
JWD9
JWD8
C31
PCD2
PCD3
PCD4
PCD1
C30
CNA12
JWE8
R24
JWE7
C19
C20
C18
C16
R23
D9
C15
R20
R21
JWF1
L6
G Q3 S
T2
R114
C28
R36
JWC6
D12
JWC5
R25
R26
C26
C27
D14
R27
JWE2
R31
R32
JWC1
R35
D15
L7
R28
JWC47
L8
G Q5 S
G Q4 S
C29
JWE4
C23
JWD17
JWE3
PC2
JWC4
R37
JWF5
C22
D21
JWE5
JWE3
JWC3
JWE4
JWC2
D11
C12
R13
C13
D7
C17
D10
R19
R14
R15
R18
R17
R16
D8
Q14
C
R30
D13
R33
R34
C25
C24
R29
D86
R116
R115
C9
K
D1
L
JWD48
JWE2
K D6 G
B
F1
A
L1
L2
L3
C4
C5
m
FG2
R202
C6
D
H
F
G
C8
C7
H
R1
B
Q2
E
R11
R12
R4
R6
R8
R10
R5
R7
R9
R22
Q1
D5
D4
I
J
D44
RL1
AC IN (H)
C1
C3
FG1
C2
AC IN (C)
CNA3
R201
PTH1
JWD1
PTH2
CNA1
CNA2
C10
C101
C11
C102
JWE1
A

SW REG CONTROL PWB (PG031B)


Y1
IC1
μPC1900CS
L1
B-20L-44
R26 0
C17 0.1μ
C14 100μ 16V
R22 360
R24 1.8k
R2 47k
C1 2.2μ
R1 47k
D8 1SS120
R3 2.2k
R4 100k
R6 0
R5 1k
R7 18k
R8 47k
C2 22μ 25V
C3 1000p
R10 680※
R9 18k
JW
C4 22μ 25V
C5 0.1μ
C6 ※
JW (C15)
R12 ※
R13 ※
R14 ※
R15 0
R16 2.2k
C7 1μ
R17 47k
C8 0.1μ
R18 47k
R19 470
D9 1SS120
R25 1.8k
C9 0.47μ
R21 3.3k
R20 3.3k
Q4 2SB1229
Q3 2SD1835
Q1 2SD1835
Q2 2SB1229
D6 1SS83
D7 1SS83
D4 1SS83
D5 1SS83
D3 ERA82-004
D2 ERA82-004
C12 22μ
C11 22μ
C16 0.1μ
DTC1
FB1
II1
IN1
CT
RT
Vcc
IN2
II2
FB2
DTC2
OVL
OCL
VREF
OC1
RC1
EMI1
OUT1
COL
OUT2
EMI2
RC2
OC2
GND
1 FB1
2 VREF1
3 IN1
4 NC
5 EMI1
6 OUT1
7 Vcc
8 OUT2
9 EMI2
10 REMOTE
11 GND
12 IN2
13 OVP
14 VREF2
15 FB2
PG042B SW REG CONTROL【L】

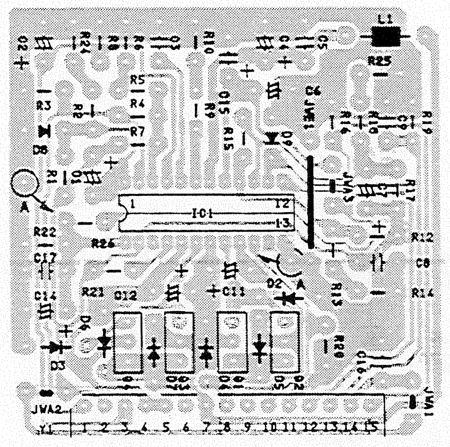
【Parts numbers are indicated as R3 instead of ROL003 in the case of resistors, as IC3 intead of ICL003 in the case of ICs.

部品番号は、抵抗の場合 ROL003 が R3, IC の場合 ICL003 が IC3 の様に 略記されています。】

NOTES
1. All capacitors are 50V unless otherwise noted. Unit is in FARAD (F).
2. All resistors are 0.25W unless otherwise noted. Unit is in OHM (Ω).
3. Components marked with ※ are subject to change without notice.
4. Semiconductors may be changed for equivalent ones.
5. Ⓜ : Fixed Metal Film Resistor
6. Ⓕ : Fuse Resistor
7. (PP) : Polyphenlene Sulfide Film Capacitor

注意
1． 指示なき抵抗は（Ω），コンデンサーは（F）
2． 指示なき抵抗ワッテージは０．２５W，コンデンサー耐圧は５０V
3． ※印は調整により変更することがある。
4． 半導体は相当規格品とおきかえることがある。
5． Ⓜ：金属皮膜固定抵抗器
6． Ⓕ：ヒューズ抵抗器
7． (PP)：ポリエステルフィルムコンデンサ

SOLDER SIDE


L1
R25
R24
R3
D8
R22
C17
C14
R21
R5
R4
R7
R26
IC1
R15
C6
JW1
JW3
R16
D7
C12
R17
R12
C8
R14
R13
D2
R20
D4
D3
D5
JVA2
JVA1
Y1
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15

VOLTAGE

LOCATION	C	B	E
	D	G	S
Q 1	266.0	12.6	12.0
Q 2	27.0	27.0	27.0
Q 3	250.0	3.9	0.0
Q 4	265.0	3.6	0.0
Q 5	265.0	3.6	0.0
Q 6	-	-	-
Q 7	-	-	-
Q 8	-	-	-
Q 9	15.8	0.0	0.0
Q 10	3.5	4.5	5.0

CNA4	VOLTAGE
1	15.0
2	0.0
3	5.0
4	0.0
5	0.0
6	5.0
7	5.0
8	4.4
9	0.0

CNA5	VOLTAGE
1	5.0
2	0.0
3	15.0
4	0.0
5	15.0
6	0.0
7	0.0
8	0.0
9	0.0
10	165.0
11	0.0
12	0.0

CNA6	VOLTAGE
1	6.1
2	0.0

CNA7	VOLTAGE
1	190.0
2	0.0
3	0.0
4	15.0
5	0.0
6	5.0
7	0.0

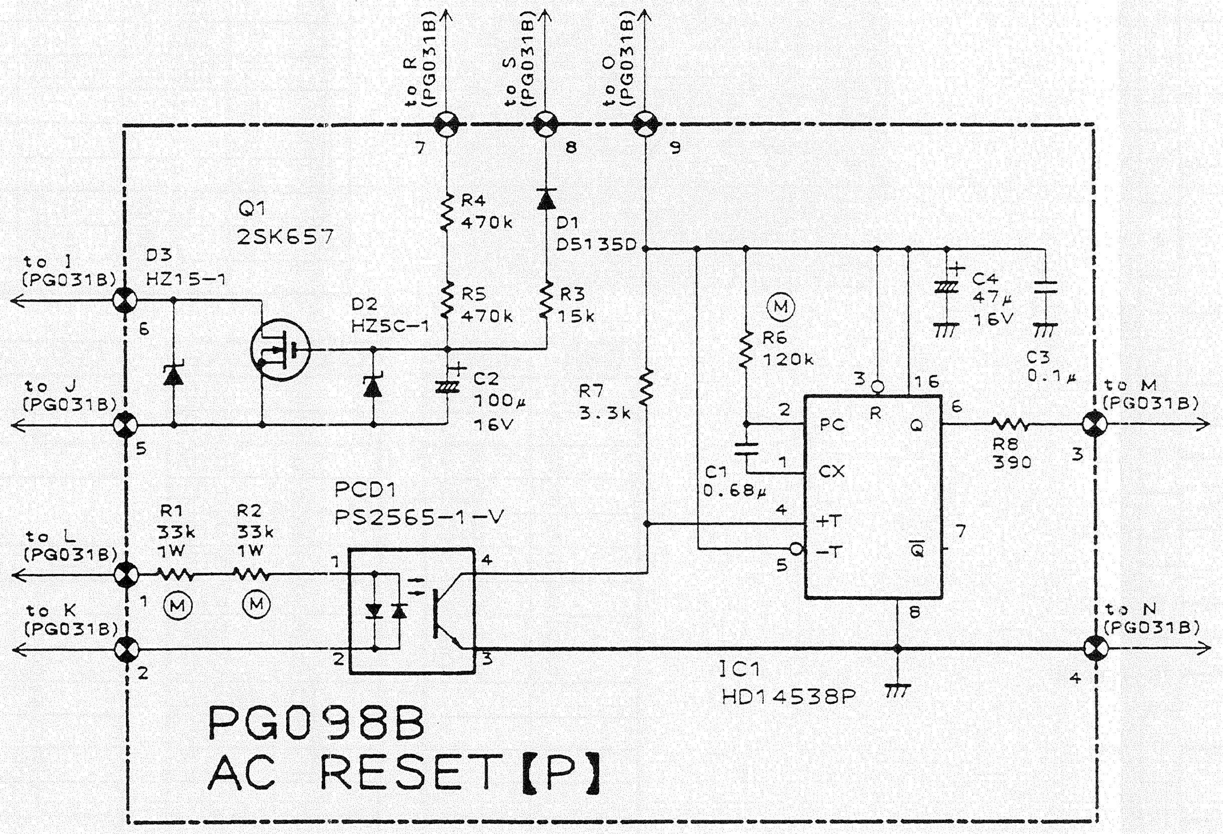
CNA8	VOLTAGE
1	165.0
2	0.0
3	28.0
4	0.0
5	15.0
6	0.0

CNA9	VOLTAGE
1	22.9
2	0.0
3	0.0
4	5.0
5	0.0

CNA13	VOLTAGE
1	27.1
2	0.0
3	15.0

Y1	VOLTAGE
1	2.6
2	2.6
3	0.0
4	0.0
5	0.0
6	4.8
7	13.5
8	5.3
9	0.0
10	4.8
11	0.0
12	0.0
13	0.0
14	5.0
15	2.5

AC RET PWB (PG098B)


to R (PG031B)
to S (PG031B)
to O (PG031B)
7
8
9
Q1
2SK657
R4
470k
D1
DS135D
to I (PG031B)
D3
HZ15-1
D2
HZ5C-1
R5
470k
R3
15k
C2
100μ
16V
to J (PG031B)
6
5
Ⓜ
R6
120k
C4
47μ
16V
C3
0.1μ
R7
3.3k
to M (PG031B)
PC
R
Q
CX
+T
−T
Q̄
R8
390
C1
0.68μ
3
PCD1
PS2565-1-V
R1
33k
1W
R2
33k
1W
to L (PG031B)
to K (PG031B)
Ⓜ
Ⓜ
to N (PG031B)
IC1
HD14538P
PG098B
AC RESET【P】

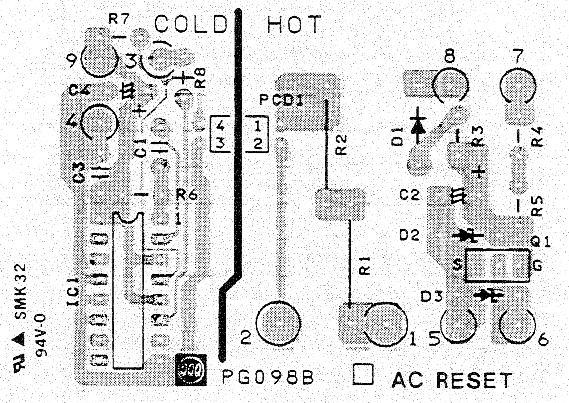
【Parts numbers are indicated as R3 instead of ROP003 in the case of resistors, as IC3 instead of ICP003 in the case of ICs.

部品番号は、抵抗の場合 ROP003 が R3, ICの場合 ICP003 がIC3の様に 略記されています】

NOTES
1. All capacitors are 50V unless otherwise noted. Unit is in FARAD (F).
2. All resistors are 0.25W unless otherwise noted. Unit is in OHM (Ω).
3. Semiconductors may be changed for equivalent ones.
4. Ⓜ : Fixed Metal Film Resistor

注意1． 指示なき抵抗は（Ω），コンデンサーは（F）
2． 指示なき抵抗ワッテージは０．２５W，コンデンサー耐圧は５０V.
3． 半導体は相当規格品とおきかえることがある.
4． Ⓜ：金属皮膜固定抵抗器

SOLDER SIDE


R7
COLD
HOT
9
3
C4
R8
C1
C3
R6
PCD1
4 3
1 2
R2
8
7
D1
R3
R4
C2
R5
D2
Q1
S
G
D3
R1
IC1
SMK32
94V-0
2
1 5
6
PG098B
□ AC RESET